SONY

3-070-853-**11**(1)

SACD/DVD Player

Operating Instructions

DVP-NS900V

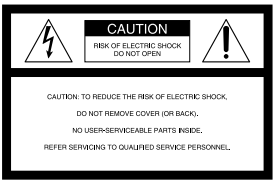
© 2001 Sony Corporation

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.
To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

CAUTION

The use of optical instruments with this product will increase eye hazard. As the laser beam used in this SACD/DVD player is harmful to eyes, do not attempt to disassemble the cabinet.
Refer servicing to qualified personnel only.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

CAUTION

TO PREVENT ELECTRIC SHOCK MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

For customers in the U.S.A

Owner's Record

The model and serial numbers are located at the rear of the unit. Record the serial number in the space provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. DVP-NS900V
Serial No._____

CAUTION

You are cautioned that any change or modifications not expressly approved in this manual could void your authority to operate this equipment.

Note

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

— Reorient or relocate the receiving antenna.
— Increase the separation between the equipment and receiver.
— Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
— Consult the dealer or an experienced radio/TV technician for help.

Welcome!

Thank you for purchasing this Sony SACD/DVD Player. Before operating this player, please read this manual thoroughly and retain it for future reference.

Precautions

On safety

- Caution – The use of optical instruments with this product will increase eye hazard.
- Should any solid object or liquid fall into the cabinet, unplug the player and have it checked by qualified personnel before operating it any further.

On power sources

- The player is not disconnected from the AC power source as long as it is connected to the wall outlet, even if the player itself has been turned off.
- If you are not going to use the player for a long time, be sure to disconnect the player from the wall outlet. To disconnect the AC power cord, grasp the plug itself; never pull the cord.
- Should the AC power cord need to be changed, have it done at a qualified service shop only.

On placement

- Place the player in a location with adequate ventilation to prevent heat build-up in the player.
- Do not place the player on a soft surface such as a rug that might block the ventilation holes on the bottom.
- Do not place the player in a location near heat sources, or in a place subject to direct sunlight, excessive dust, or mechanical shock.

On operation

- If the player is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense on the lenses inside the player. Should this occur, the player may not operate properly. In this case, remove the disc and leave the player turned on for about half an hour until the moisture evaporates.
- When you move the player, take out any discs. If you don't, the disc may be damaged.

On adjusting volume

Do not turn up the volume while listening to a section with very low level inputs or no audio signals. If you do, the speakers may be damaged when a peak level section is played.

On cleaning

Clean the cabinet, panel, and controls with a soft cloth slightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine.

If you have any questions or problems concerning your player, please consult your nearest Sony dealer.

On cleaning discs

Do not use a commercially available cleaning disc. It may cause a malfunction.

IMPORTANT NOTICE

Caution: This player is capable of holding a still video image or on-screen display image on your television screen indefinitely. If you leave the still video image or on-screen display image displayed on your TV for an extended period of time you risk permanent damage to your television screen. Projection televisions are especially susceptible to this.

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About this Manual

- Instructions in this manual describe the controls on the remote. You can also use the controls on the player if they have the same or similar names as those on the remote.
- The meaning of the icons used in this manual is described below:

Icon	Meaning
DVD VIDEO	Functions available for DVD VIDEOs or DVD-Rs/DVD-RWs in Video mode
DVD-RW	Functions available for DVD-RWs in VR (Video Recording) mode
VIDEO CD	Functions available for VIDEO CDs or CD-Rs/CD-RWs
SACD	Functions available for Super Audio CDs
CD	Functions available for music CDs or CD-Rs/CD-RWs
	More convenient features

"DVD" may be used as a general term for DVD VIDEOs, DVD-Rs, and DVD-RWs.

This Player Can Play the Following Discs

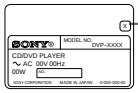
Format of discs	
DVD VIDEO	
DVD-RW	
SACD	
VIDEO CD	
Music CD	

"DVD VIDEO" and "DVD-RW" are trademarks.

Region code

Your player has a region code printed on the back of the unit and only will play DVD VIDEO discs (playback only) labeled with identical region codes.

DVDs labeled ALL will also play on this player.
If you try to play any other DVD, the message "Playback prohibited by area limitations." will appear on the TV screen. Depending on the DVD, no region code indication may be labeled even though playing the DVD is prohibited by area restrictions.



Example of discs that the player cannot play

The player cannot play the following discs:
- CD-ROMs (PHOTO CDs included)
- All CD-Rs/CD-RWs other than music and VCD format CD-Rs/CD-RWs
- Data part of CD-Extras
- DVD-ROMs
- DVD Audio discs

Also, the player cannot play the following discs:
- A DVD with a different region code (page 97).
- A disc recorded in a color system other than NTSC, such as PAL or SECAM (this player conforms to the NTSC color system).
- A disc that has a non-standard shape (e.g., card, heart).
- A disc with paper or stickers on it.
- A disc that has the adhesive of cellophane tape or a sticker still left on it.

Note

Some DVD-Rs, DVD-RWs, CD-Rs, or CD-RWs cannot be played on this player due to the recording quality or physical condition of the disc, or the characteristics of the recording device. DVD-RWs in VR mode may also take time to play back due to the recording condition.
Furthermore, the disc will not play if it has not been correctly finalized. For more information, see the operating instructions for the recording device.

Note on playback operations of DVDs and VIDEO CDs

Some playback operations of DVDs and VIDEO CDs may be intentionally set by software producers. Since this player plays DVDs and VIDEO CDs according to the disc contents the software producers designed, some playback features may not be available. Also, refer to the instructions supplied with the DVDs or VIDEO CDs.

Copyrights

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents, other intellectual property rights owned by Macrovision Corporation, and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

Notes about the Discs

On handling discs

- To keep the disc clean, handle the disc by its edge. Do not touch the surface.

- Do not expose the disc to direct sunlight or heat sources such as hot air ducts, or leave it in a car parked in direct sunlight as the temperature may rise considerably inside the car.
- After playing, store the disc in its case.

On cleaning

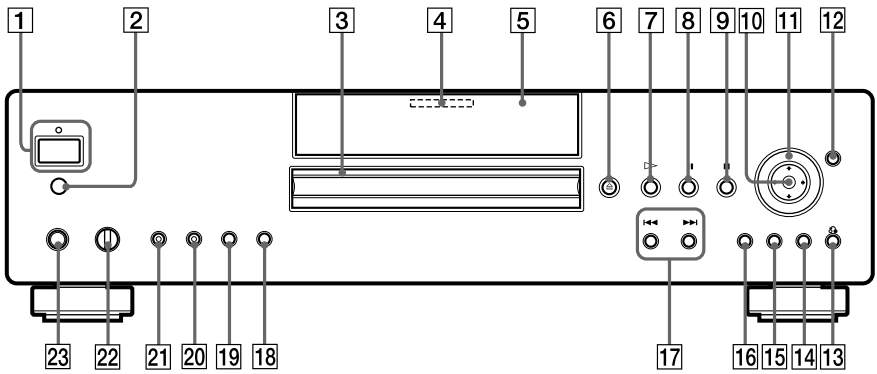
- Before playing, clean the disc with a cleaning cloth.
  Wipe the disc from the center out.

- Do not use solvents such as benzine, thinner, commercially available cleaners, or anti-static spray intended for vinyl LPs.

Index to Parts and Controls

For more information, refer to the pages indicated in parentheses.

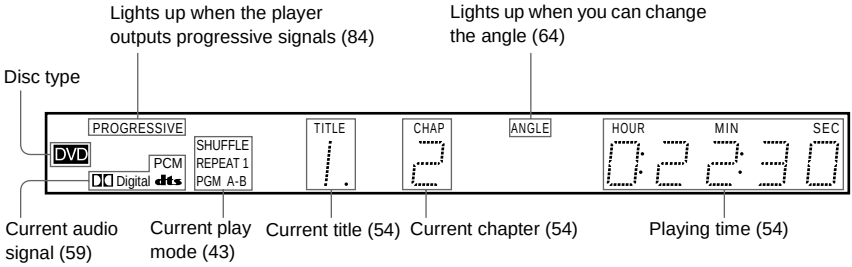
Front panel



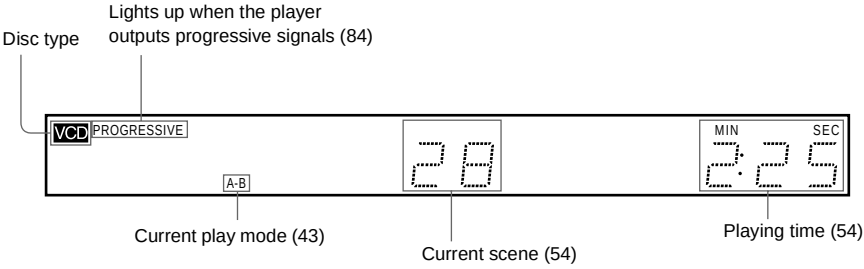
1 POWER switch/indicator (37)
2 (remote sensor) (16)
3 Disc tray (37)
4 MULTI CHANNEL indicator
Lights up when:
— playing a disc that contains multiple audio signal channels
— the disc is not inserted
5 Front panel display (9)
6 ⏏ (open/close) button (37)
7 ▷ (play) button/indicator (37)
8 ❚❚ (pause) button/indicator (38) (77)
9 ■ (stop) button (37)
10 ←/↑/↓/→/ ENTER button (31)
11 Click shuttle (49)
12 JOG button/indicator (50)
13 RETURN button (42)
14 MENU button (40)
15 TOP MENU button (40)
16 DISPLAY button (13)
17 I◀◀ /▶▶I (previous/next) buttons (38)
18 SACD indicator
Lights up when the disc is a Super Audio CD
19 DVD indicator
Lights up when the disc is a DVD
20 FL OFF button/indicator (86)
21 VIDEO OFF button/indicator (37)
22 PHONES LEVEL control (37)
23 PHONES jack (37)

Front panel display

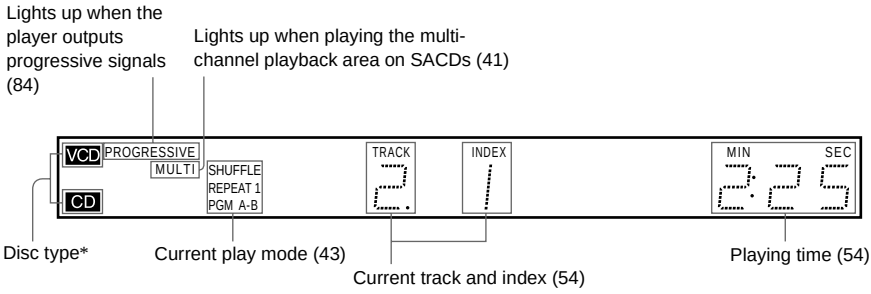
When playing back a DVD VIDEO/DVD-RW



When playing back a VIDEO CD (PBC)



When playing back an SACD, CD, or VIDEO CD (without PBC)



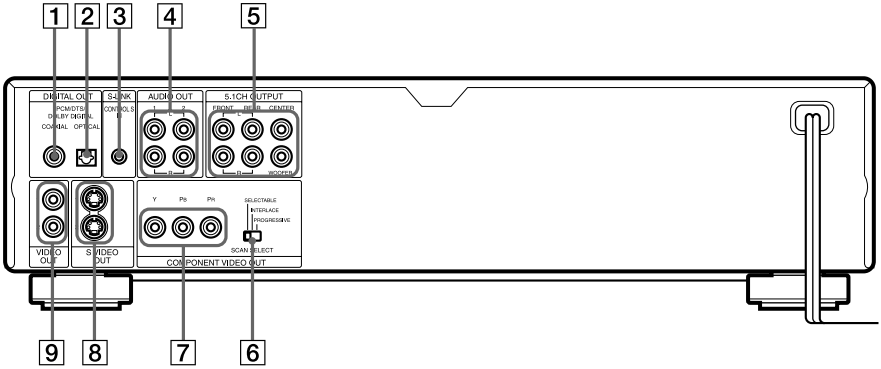
* When playing the SACD layer of SACD discs, the disc type is not displayed.

You can turn off the front panel display by:
— pressing FL OFF on the player
— using the scroll key and LCD screen on the remote (page 12)
— setting “DIMMER” of “CUSTOM SETUP” to “OFF” or “AUTO OFF” in the Setup Display (page 86).

When the front panel display turns off, the FL OFF indicator lights up on the player.

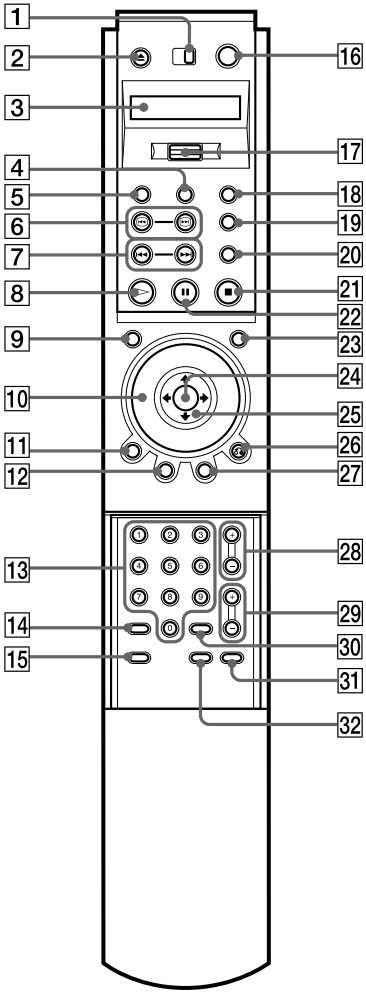
continued

Rear panel



1 DIGITAL OUT (COAXIAL) jack (25) (27) (29)
2 DIGITAL OUT (OPTICAL) jack (25) (27) (29)
3 S-LINK/CONTROL S IN jack (17)
4 AUDIO OUT L/R 1/2 jacks (24) (27) (29)
5 5.1CH OUTPUT jacks (25)
6 COMPONENT VIDEO OUT/SCAN SELECT switch (84)
7 COMPONENT VIDEO OUT (Y, P_B, P_R) jacks (20)
8 S VIDEO OUT 1/2 jacks (20)
9 VIDEO OUT 1/2 jacks (20)

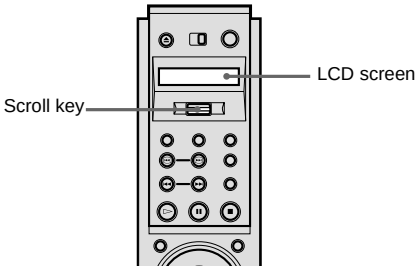
Remote



1 TV/DVD switch (78)
2 ⏏ OPEN/CLOSE button (38)
3 LCD (Liquid Crystal Display) screen (12)
4 PROGRAM button (43)
5 VIDEO EQ (video equalizer) button (67)
6 ⏪/⏩ SEARCH buttons (49)
7 ⏮/⏭ PREV/NEXT (previous/next) buttons (38)
8 ▷ PLAY button (37)
The ▷ button has a tactile dot.
9 VIDEO ON/OFF button (37)
10 Click shuttle (49)
11 DISPLAY button (13)
12 TOP MENU button (40)
13 Number buttons (40)
The number 5 button has a tactile dot.
14 CLEAR button (43)
15 SEARCH MODE button (50)
16 I/⏻ (on/standby) button (37) (78)
17 Scroll key (12)
18 PICTURE MEMORY button (83)
19 BOOKMARK button (53)
20 REPLAY button (38)
21 ■ STOP button (37)
22 ❚❚ PAUSE button (38)
23 JOG button (50)
24 ENTER button (31)
25 ←/↑/↓/→ buttons (31)
26 ⮌ RETURN button (42)
27 MENU button (40)
28 CH (channel) +/– buttons (78)
The + button has a tactile dot.
29 VOL (volume) +/– buttons (78)
The + button has a tactile dot.
30 ENTER button
31 WIDE MODE button (78)
32 TV/VIDEO button (78)

Guide to the Remote Control LCD Screen

The supplied remote has an LCD (Liquid Crystal Display) screen and scroll key for controlling the player without using the Control Menu Display. By pushing the scroll key up or down, you can call up various displays and functions such as “TIME/TEXT” and “SUBTITLE.”



LCD contents

The following commands are contained in the LCD. The commands will scroll continuously if you keep the scroll key pushed up or down.

TIME/TEXT (page 55) ↔ FL ON/OFF (page 86) ↔ MULTI/2CH (page 41)
↕ ↕
AUDIO (page 58) SACD/CD (page 42)
↕ ↕
SUBTITLE (page 65) DVE (page 70)
↕ ↕
ANGLE (page 64) BNR (page 66)
↕ ↕
SURROUND (page 60) A-B (page 47)
↕ ↕
SHUFFLE (page 45) ↔ REPEAT (page 46)

Operating the LCD and scroll key

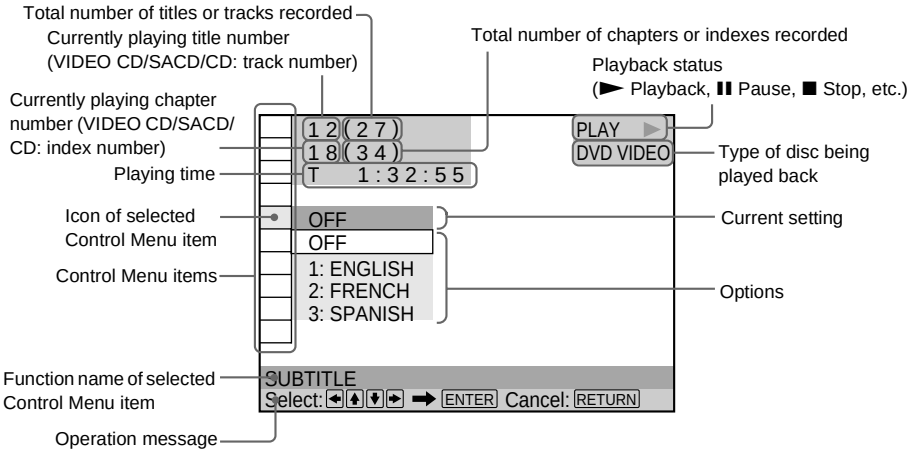
1 Toggle the scroll key up or down to select a command.

2 Point the remote at the (remote sensor) on the player and press down on the word PUSH imprinted on the scroll key so that appears in the LCD screen.
The player will respond to the selected command as long as the command remains in the LCD screen. Some commands require you to press down on the scroll key repeatedly. For a description of each command listed above, refer to the pages in parentheses.

Guide to the Control Menu Display

Use the Control Menu to select a function that you would like to use. The Control Menu display appears when the DISPLAY button is pressed. For details, please refer to the page in parentheses.

Control Menu



List of Control Menu Items

TITLE (page 50)/SCENE (page 50)/TRACK (page 50)	Selects the title, scene, or track to be played.
CHAPTER (page 50)/INDEX (page 50)	Selects the chapter or index to be played.
TRACK (page 50)	Selects the track to be played.
INDEX (page 50)	Selects the index to be played.
TIME/TEXT (page 50) **TIME/MEMO (page 50)**	Checks the elapsed time and the remaining playback time. Input the time code for picture and music searching. Displays the DVD or SACD/CD text. Displays the label (Disc Memo) you assigned to a disc.
ORIGINAL/PLAY LIST (page 40)	Selects the type of titles (DVD-RW) to be played, the ORIGINAL one, or an edited PLAY LIST.
AUDIO (page 58)	Changes the audio setting.

continued

MULTI/2CH (page 41)	Selects the playback area on SACDs when available.
SUBTITLE (page 65)	Displays the subtitles. Changes the subtitle language.
ANGLE (page 64)	Changes the angle.
SURROUND (page 60)	Selects the surround functions.
ADVANCED (page 57)	Checks the information (bit rate or layer) on the disc while playing a DVD.
PARENTAL CONTROL (page 72)	Set to prohibit playback on this player.
SETUP (page 80)	QUICK Setup (page 31) Use Quick Setup to choose the desired language of the on-screen display, the aspect ratio of the TV, the audio output, and the appropriate speaker settings. CUSTOM Setup In addition to the Quick Setup setting, you can adjust other various settings. RESET Returns the settings in “SETUP” to the default setting.
PROGRAM (page 43)	Selects the title, chapter, or track to play in the order you want.
SHUFFLE (page 45)	Plays the title, chapter, or track in random order.
REPEAT (page 46)	Plays the entire disc (all titles/all tracks) repeatedly or one title/chapter/track repeatedly.
A-B REPEAT (page 47)	Specifies the parts you want to play repeatedly.
BNR (page 66)	Adjusts the picture quality by reducing the “block noise” or mosaic like patterns that appear on your TV screen.
VIDEO EQUALIZER (page 67)	Adjusts the video signal from the player. You can select the picture quality that best suits the program you are watching.
DIGITAL VIDEO ENHANCER (page 70)	Exaggerates the outline of the image to produce a sharper picture.
VIEWER (page 52)	Divides the screen into 9 subscreens to help you find the scene you want quickly.

Each time you press DISPLAY, the Control Menu display changes as follows:

Control Menu display 1
↓
Control Menu display 2
↓
ADVANCED display (Appears if you select any setting other than “OFF.” See page 57.)
↓
Control Menu display off

When playing an SACD/CD disc, only the Control Menu display 1 will appear. The Control Menu items are different depending on the disc.

The Control Menu icon indicator lights up in green → when you select any item except “OFF.” (“SURROUND,” “PROGRAM,” “SHUFFLE,” “REPEAT,” “A-B REPEAT,” “BNR,” “DIGITAL VIDEO ENHANCER” only). The “ANGLE” indicator lights up in green only when the angles can be changed. The “VIDEO EQUALIZER” indicator lights up in green when any setting other than “STANDARD” is selected. The “VIEWER” indicator lights up in green when a bookmark is set.

Quick Overview

A quick overview presented in this chapter will give you enough information to start using the player for your enjoyment. To use the surround sound features of this player, refer to “Hookups” on page 20.

Notes

- You cannot connect this player to a TV that does not have a video input jack.
- Be sure to turn off the power of each component before connecting.

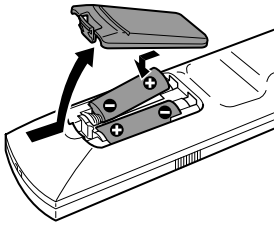
Step 1: Unpacking

Check that you have the following items:

- Audio/video cord (pinplug × 3 ⟷ pinplug × 3) (1)
- S VIDEO cord (1)
- Remote commander (remote) RMT-D140A (1)
- Size AA (R6) batteries (2)

Step 2: Inserting Batteries into the Remote

You can control the player using the supplied remote. Insert two size AA (R6) batteries by matching the ⊕ and ⊖ ends on the batteries to the markings inside the compartment. When using the remote, point it at the remote sensor on the player.

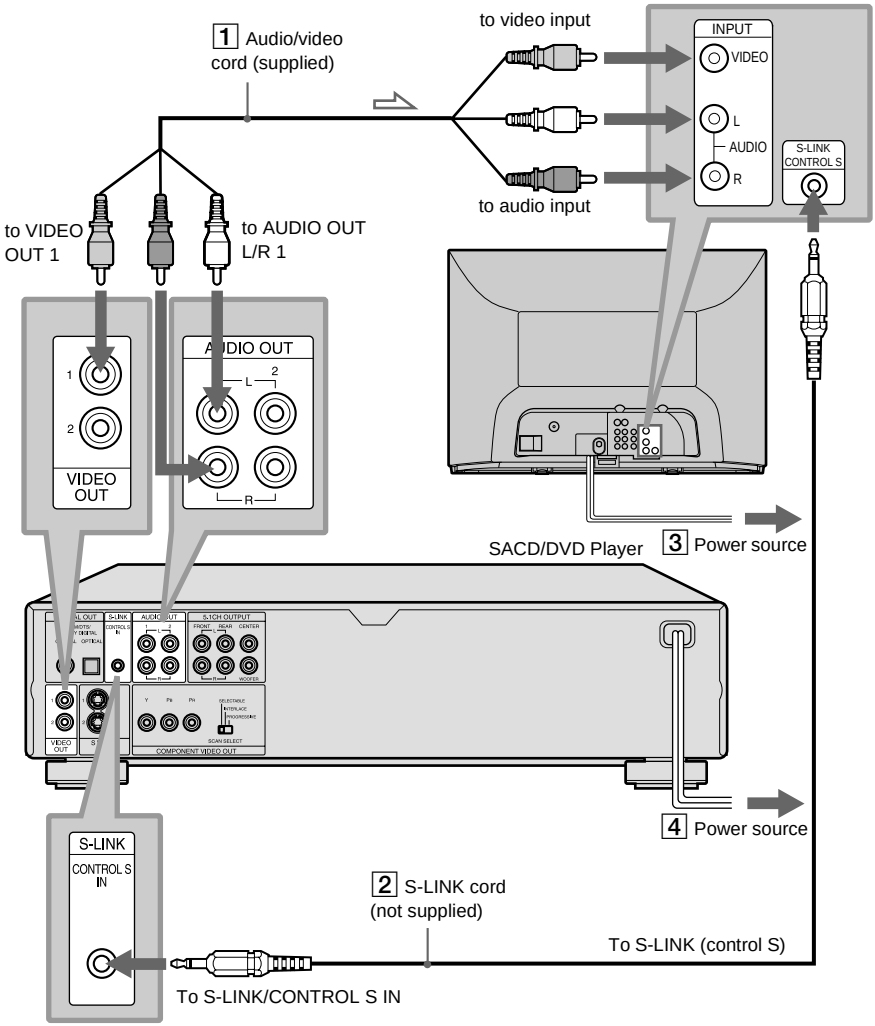


Notes

- Do not leave the remote in an extremely hot or humid place.
- Do not drop any foreign object into the remote casing, particularly when replacing the batteries.
- Do not expose the remote sensor to direct light from the sun or a lighting apparatus. Doing so may cause a malfunction.
- If you do not use the remote for an extended period of time, remove the batteries to avoid possible damage from battery leakage and corrosion.

Step 3: TV Hookups

Connect the supplied audio/video cord and the power cord in the order (1~4) shown below. Be sure to connect the power code last.



When connecting to a wide screen TV

Depending on the disc, the image may not fit your TV screen.
If you want to change the aspect ratio, please refer to page 82.

continued

When connecting to a TV that accepts progressive (480p) format signals

You need to use the COMPONENT VIDEO OUT jacks to view progressive signals. Hook up your TV using pattern Ⓒ on page 20, and then run Quick Setup on page 31.

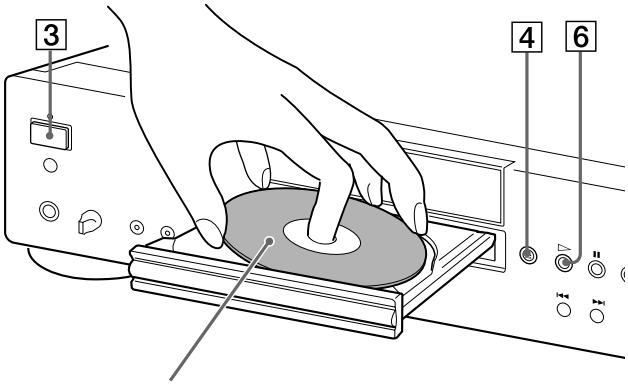
If your TV has an S-LINK (control S) input jack

You can control the player from a Sony TV, or control a Sony TV using the player. For instance, when you play a DVD, the TV's input will automatically switch to the jack to which you connected the player.
Connect the TV via the S-LINK/CONTROL S IN jack using an S-LINK cord (not supplied). Refer to the instructions supplied with the TV.

Step 4: Playing a Disc

1 **Turn on the TV.**

2 **Switch the input selector on the TV to the player.**



With the playback side facing down

3 **Press POWER on the player.**

4 **Press ⏏ on the player to open the disc tray.**

5 **Place the disc on the tray with the playback side facing down.**

6 **Press ▷.**
The disc tray closes and the player begins playing the disc.

After Step 6

Depending on the disc, a menu may be displayed on the TV screen. If so, select the item you want from the menu and play the DVD VIDEO (page 40) or VIDEO CD disc (page 42).

To stop playing

Press ■.

To take out the disc

Press ⏏.

To turn off the player

Press I/⏻ on the remote. The player is set to standby mode and the power indicator lights up in red. Press POWER on the player to turn off completely.

Hooking Up the Player

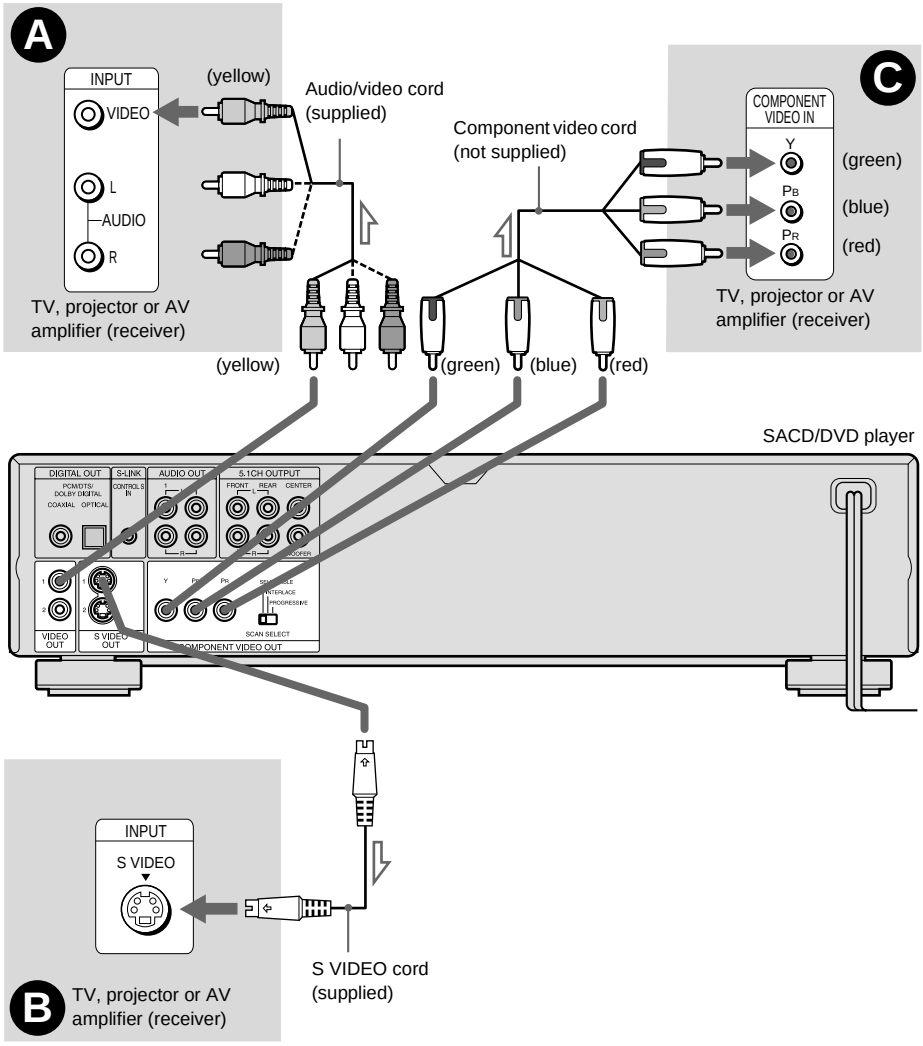
Follow Steps 1 to 4 to hook up and adjust the settings of the player.
Before you start, turn off the power, check that you have all of the supplied accessories, and insert the batteries into the remote (page 16).

Notes

- Plug cords securely to prevent unwanted noise.
- Refer to the instructions supplied with the components to be connected.

Step 1: Connecting the Video Cords

Connect this player to your TV monitor, projector, or AV amplifier (receiver) using a video cord. Select one of the patterns Ⓐ through Ⓒ, according to the input jack on your TV monitor, projector, or AV amplifier (receiver). In order to view progressive signal (480p) pictures with a compatible TV, projector, or monitor, you must use connection Ⓒ.

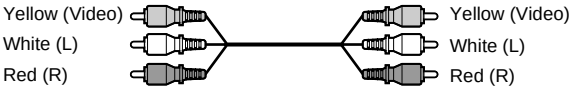


: Signal flow

continued

A If you are connecting to a video input jack

Connect the yellow plug of the audio/video cord (supplied) to the yellow (video) jacks. You will enjoy standard quality images.



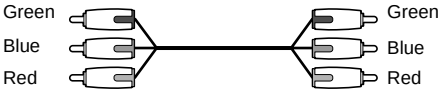
Use the red and white plugs to connect to the audio input jacks (page 24).

B If you are connecting to an S VIDEO input jack

Connect the S VIDEO cord (supplied). You will enjoy high quality images.

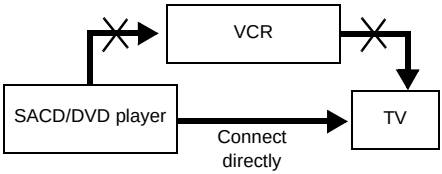
C If you are connecting to a monitor, projector, or AV amplifier (receiver) having component video input jacks (Y, P_B, P_R)

Connect the component via the COMPONENT VIDEO OUT jacks using the component video cord (not supplied) or three video cords (not supplied) of the same kind and length. You will enjoy accurate color reproduction and high quality images. If your TV accepts progressive (480p) format signals, you must use this connection and set “COMPONENT OUT” to “PROGRESSIVE” in “SCREEN SETUP” (page 82).



Notes

- Do not connect the player to a VCR. If you pass the player signals via the VCR, you may not receive a clear image on the TV screen.



- Consumers should note that not all high definition television sets are fully compatible with this product and may cause artifacts to be displayed in the picture. In the case of 480 progressive scan picture problems, it is recommended that the user switch the connection to the standard definition output. If there are questions regarding your Sony TV set’s compatibility with this model 480p DVD player, please contact our customer service center.

Step 2: Connecting the Audio Cords

Refer to the chart below to select the connection that best suits your system. The surround effects you will enjoy depend on the connections and components you use.

Select a connection

Select one of the following connections, A through D.

Connection	Components to be connected
A (page 24)	TV (stereo)
B (page 25)	AV amplifier (receiver) having 5.1ch input jacks • 4 speakers (front L and R, rear L and R) • 6 speakers (front L and R, center, rear L and R, subwoofer)
B (page 25)	AV amplifier (receiver) having a Dolby* Digital or DTS** decoder and a digital input jack • 6 speakers (front L and R, center, rear L and R, subwoofer)
C (page 27)	Stereo amplifier (receiver) (having L and R audio input jacks only, or having a digital input jack) • 2 speakers (front L and R)
C (page 27)	MD deck/DAT deck
D (page 29)	AV amplifier (receiver) with a Dolby Surround (Pro Logic) decoder (having L and R audio input jacks only, or having a digital input jack) • 3 speakers (front L and R, and rear (monaural)) • 6 speakers (front L and R, center, rear L and R, subwoofer)

To enjoy SACD Multi or 96kHz/24bit sound, use the connection B.

* Manufactured under license from Dolby Laboratories. "Dolby," "Pro Logic," and the double-D symbol are trademarks of Dolby Laboratories. Confidential unpublished works. © 1992-1997 Dolby Laboratories. All rights reserved.

** Manufactured under license from Digital Theater Systems, Inc. US Pat. No. 5,451,942 and other world-wide patents issues and pending. "DTS" and "DTS Digital Surround" are trademarks of Digital Theater Systems, Inc. © 1996 Digital Theater Systems, Inc. All rights reserved.

continued

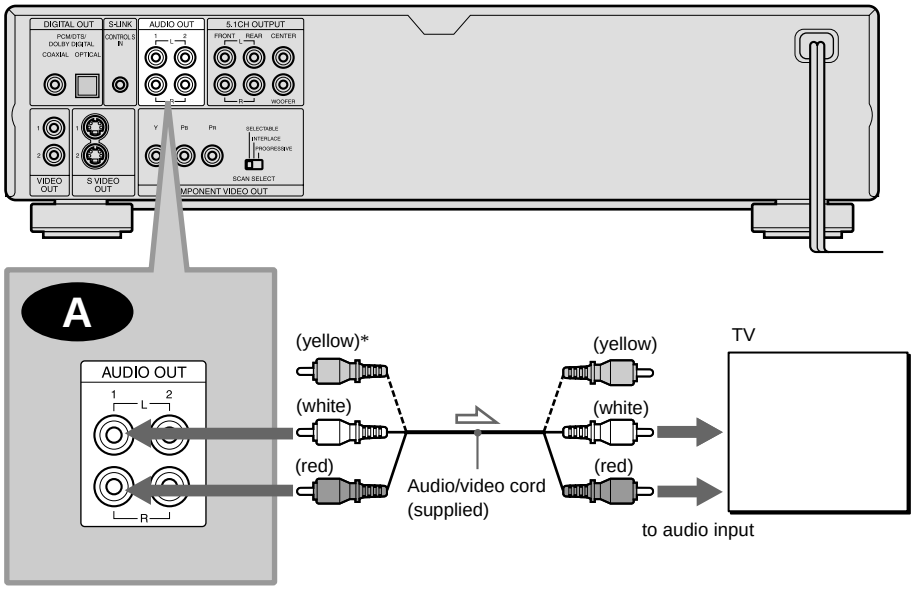
A Connecting to your TV

This connection will use your TV speakers for sound.

■Recommended surround sound effects for this connection

- TVS DYNAMIC (page 60)
- TVS WIDE (page 60)

SACD/DVD player



: Signal flow

*The yellow plug is used for video signals (page 20).

B Connecting to an AV amplifier (having 5.1ch input jacks or a digital input jack) and 4 to 6 speakers

If your AV amplifier (receiver) has 5.1 channel inputs, use B-1.
If you want to use the Dolby Digital or DTS decoder function on your AV amplifier (receiver), connect to its digital jack using B-2. With the following connections, you can enjoy a more realistic audio presence in the comfort of your own home.

B-1: Connecting to the 5.1ch input jacks

You can enjoy 5.1ch surround sound using the internal Dolby Digital, DTS, or SACD multi decoder of this player. You can also enjoy Dolby Surround (Pro Logic) sounds, or surround sounds using various "SURROUND" modes (page 60).

■Recommended surround sound effects for this connection

When 6 speakers are connected. (Set "SURROUND" to "OFF.")

- Dolby Digital (5.1ch) (page 97)
- DTS (5.1ch) (page 97)
- SACD Multi channel (page 97)

B-2: Connecting to a digital jack

This connection will allow you to use the Dolby Digital or DTS decoder function of your AV amplifier (receiver). You are not able to enjoy the surround sound effects of the player.

■Recommended surround sound effects using this connection with your amplifier (receiver)

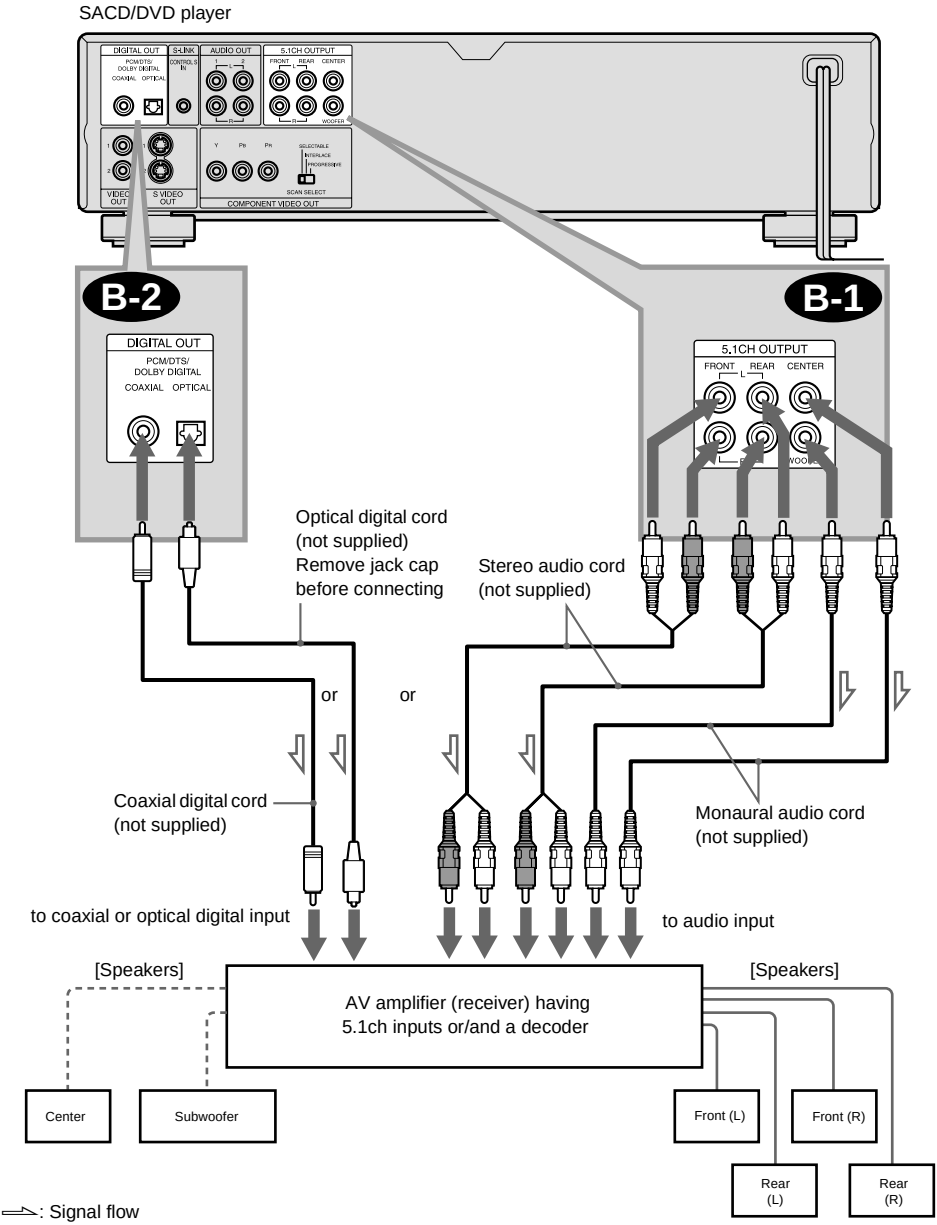
- Dolby Digital (5.1ch) (page 97)
- DTS (5.1ch) (page 97)
- 96kHz/24bit PCM

When using connection B-2, refer to the operating instructions of the receiver (amplifier) for correct speaker setting location.

Notes

- After you have completed the connection, be sure to set "DOLBY DIGITAL" to "DOLBY DIGITAL" (page 31) and "DTS" to "DTS" (page 31). Otherwise, no sound or a loud noise will come from the speakers.
- When you connect an amplifier (receiver) that conforms to the 96kHz sampling frequency, set "48kHz/96kHz PCM" to "96kHz/24bit" (page 89).
- SACD audio signals are not output from the digital jack.

continued



To enhance the surround sound effects:

- Use high-performance speakers.
- Use front, rear, and center speakers having the same size and performance.
- Place a subwoofer between the right and left front speakers.

C Connecting to a stereo amplifier (receiver) and 2 speakers/Connecting to an MD deck or DAT deck

This connection will use your 2 front speakers connected to your stereo amplifier (receiver) for sound. If the stereo amplifier (receiver) has audio input jacks L and R only, use C-1. If the amplifier (receiver) has a digital input jack, use C-2. When connecting to an MD deck or a DAT deck, use C-2. In this case, you can also connect the player directly to the MD deck or DAT deck without using your stereo amplifier (receiver).

■Recommended surround sound effects for the C-1 connection only

- TVS STANDARD (page 60)

In connection C-1, you can use the supplied audio/video cord instead of using a separate audio cord.

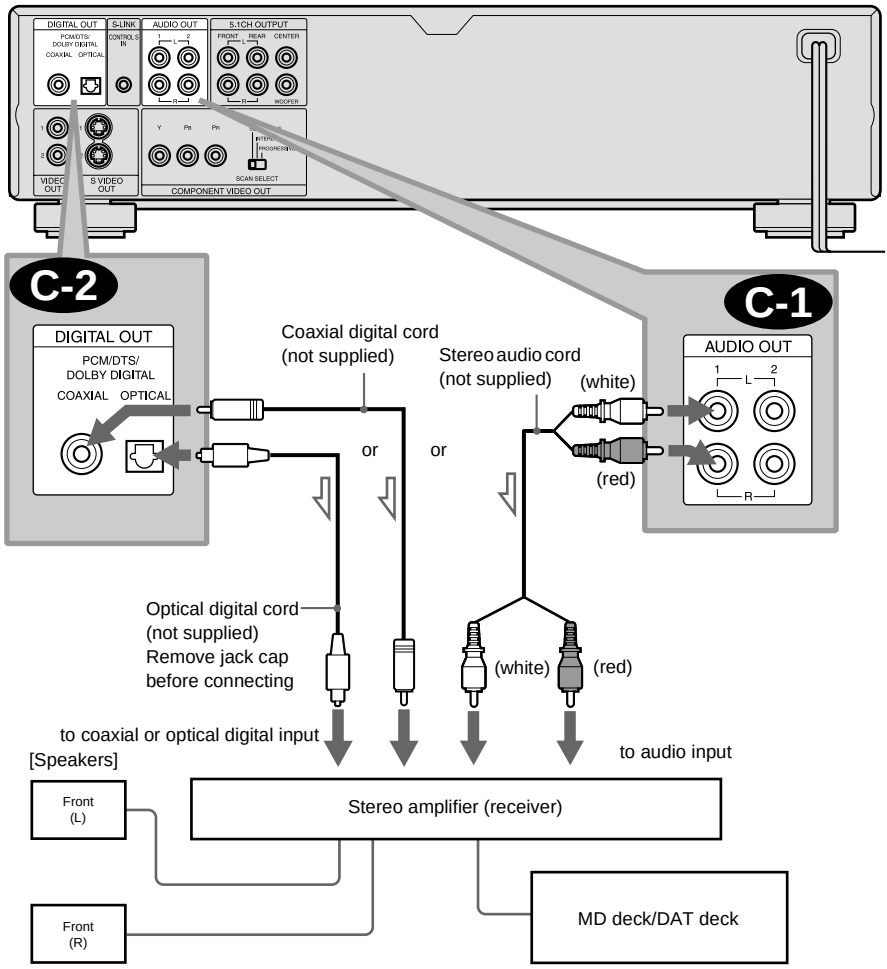
To realize better surround sound effects, make sure that your listening position is in between your speakers.

Note

SACD audio signals are not output from the digital jack.

continued

SACD/DVD player



D Connecting to an AV amplifier (receiver) having a Dolby Surround (Pro Logic) decoder and 3 to 6 speakers

This connection will allow you to enjoy the surround effects of the Dolby Surround (Pro Logic) decoder on your amplifier (receiver). If you have an AV amplifier (receiver) equipped with a Dolby Digital or DTS decoder, refer to page 25.
You can enjoy the Dolby Surround effects only when playing Dolby Surround audio or multi-channel audio (Dolby Digital) discs.
This connection needs a minimum of 3 speakers (front L and R, and rear (monaural)). The surround effects are enhanced if 6 speakers (front L and R, center, rear L and R, and subwoofer) are used.
If your amplifier (receiver) has L and R audio input jacks only, use D-1. If your amplifier (receiver) has a digital input jack, use D-2.

■Recommended surround sound effects using this connection with your amplifier (receiver)

- Dolby Surround (Pro Logic) (page 97)

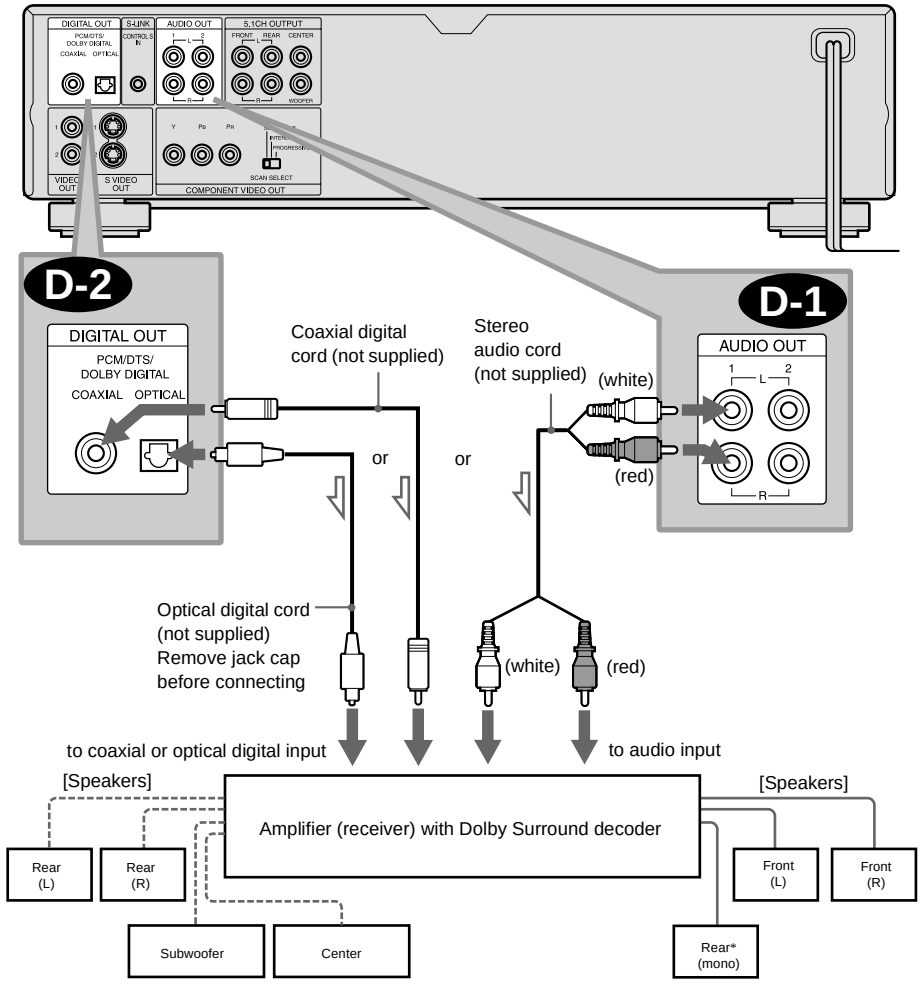
For correct speaker setting location, please refer to the operating instructions of the amplifier (receiver).

Note

SACD audio signals are not output from the digital jack.

continued

SACD/DVD player



: Signal flow

*When connecting 6 speakers, replace the monaural rear speaker with a center speaker, 2 rear speakers and a subwoofer.

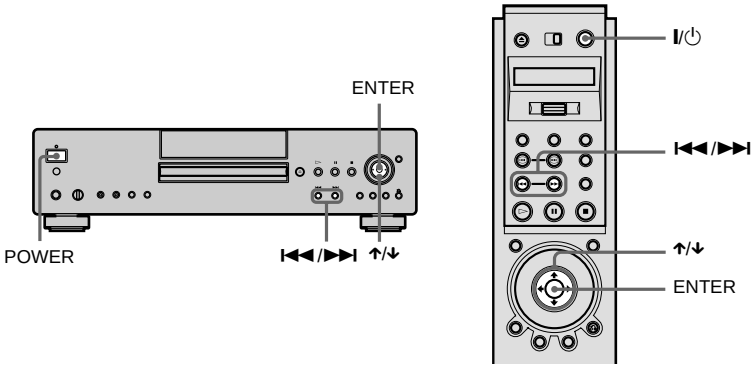
Step 3: Connecting the Power Cord

Plug the player and TV power cords into an AC outlet.

Do not connect the power cord of your player to the “switched” power socket of an amplifier (receiver). When you turn off the power of your amplifier (receiver), the menu setting for the player such as Playback Memory may be lost.

Step 4: Quick Setup

Follow the steps below to make the minimum number of basic adjustments for using the player. To skip an adjustment, press ▶▶|. To return to the previous adjustment, press |◀◀.

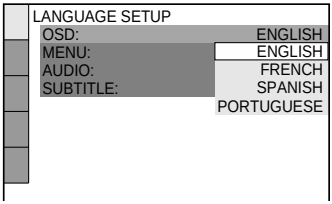


1 Turn on the TV.

2 Switch the input selector on the TV to the player.

3 Press POWER on the player and press I/⏻ on the remote.
“Press [ENTER] to run QUICK SETUP” appears at the bottom of the screen. If this message does not appear, select “QUICK” under “SETUP” in the Control Menu to run Quick Setup (page 80).

4 Press ENTER without inserting a disc.
The Setup Display for selecting the language used in the on-screen display appears.



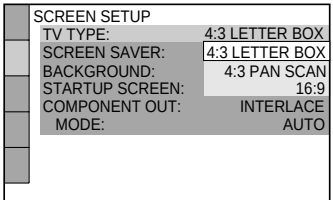
continued

5 **Press ↑/↓ to select a language.**

The player uses the language selected here to display the menu and subtitles as well.

6 **Press ENTER.**

The Setup Display for selecting the aspect ratio of the TV to be connected appears.

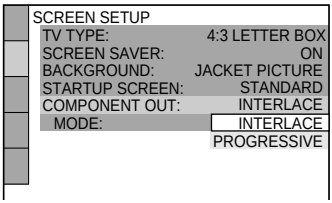


7 **Press ↑/↓ to select the item.**

TV Type	You select	Page
4:3 standard TV	4:3 LETTER BOX or 4:3 PAN SCAN	82
A wide-screen TV or a 4:3 standard TV with a wide-screen mode	16:9	82

8 **Press ENTER.**

The Setup Display for selecting the type of video signal appears.



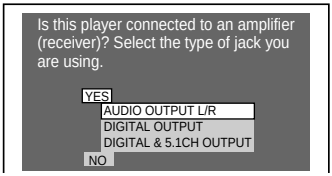
9 **Press ↑/↓ to select the item.**

Select PROGRESSIVE only if you have made video connection Ⓒ (page 20) and wish to view progressive video signals.

TV Type	You select	Page
Interlace format TV (standard TV)	INTERLACE	84
Progressive format TV	PROGRESSIVE	84

10 **Press ENTER.**

The Setup Display for selecting the type of jack used to connect your amplifier (receiver) appears.


Is this player connected to an amplifier (receiver)? Select the type of jack you are using.
YES
AUDIO OUTPUT L/R
DIGITAL OUTPUT
DIGITAL & 5.1CH OUTPUT
NO

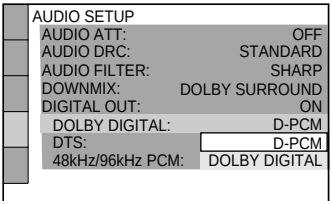
11 Press ↑/↓ to select the item, then press ENTER.

Audio Cord Connecting Type	You select
C-1 D-1	AUDIO OUTPUT L/R
B-2 C-2 D-2	DIGITAL OUTPUT
B-1 or both B-1 and B-2	DIGITAL & 5.1CH OUTPUT
A	NO

- When "NO" or "AUDIO OUTPUT L/R" is selected, Quick Setup is finished and connections are complete.
- When "DIGITAL OUTPUT" or "DIGITAL & 5.1CH OUTPUT" is selected, the Setup Display for "DOLBY DIGITAL" appears.

12 Press ↑/↓ to select the item.

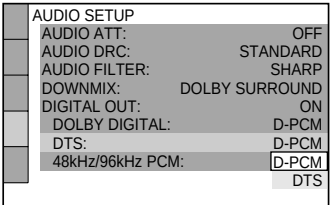
Choose the item that matches the audio connection you selected in pages 25 to 29 (B through D).



Audio Cord Connection Type	You select	Page
C-2 D-2	D-PCM	89
B-2	DOLBY DIGITAL (only if the amplifier (receiver) has a Dolby Digital decoder)	89

13 Press ENTER.

"DTS" is selected.



continued

14 Press ↑/↓ to select the item.

Choose the item that matches the audio connection you selected in pages 25 to 29 (B through D).

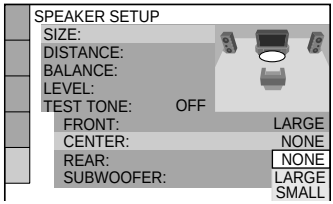
Audio Cord Connection Type	You select	Page
C-2 D-2	D-PCM	89
B-2	DTS (only if the amplifier (receiver) has a DTS decoder)	89

15 Press ENTER.

- When "DIGITAL OUTPUT" is selected in Step 11, Quick Setup is finished. All connections and setup operations are complete.
- When "DIGITAL & 5.1CH OUTPUT" is selected in Step 11, the Setup Display for "SPEAKER SETUP" appears.

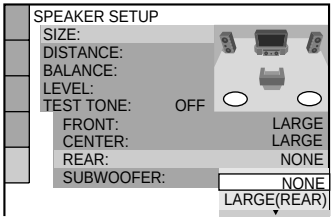
16 Press ↑/↓ to select the size of the center speaker.

If no center speaker is connected, select "NONE." Refer to page 91 for each selection item.



17 Press ENTER.

The Setup Display for selecting the size of the rear speaker appears.

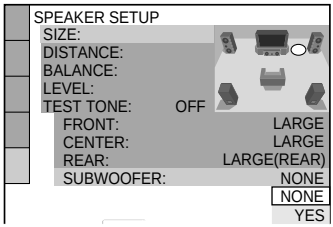


18 Press ↑/↓ to select the size.

If no rear speaker is connected, select "NONE."
"SIDE" and "REAR" refer to the speakers' position relative to your listening position.
Refer to page 91 for each selection item.

19 Press ENTER.

The Setup Display for selecting whether or not you have connected a subwoofer appears.



20 Press ↑/↓ to select the item.

21 Press ENTER.

Quick Setup is finished. All connections and setup operations are complete.

Note

You can directly start Quick Setup only when you run it for the first time.
To run Quick Setup a second time, select "QUICK" under "SETUP" in the Control Menu (page 80).

Enjoying the surround sound effects

To enjoy the surround sound effects of this player or your amplifier (receiver), the following items must be set as described below for the audio connection you selected in pages 25 to 29 (B through D). Each of these are the default settings and do not need to be adjusted when you first connect the player. Refer to page 80 for using the Setup Display.

Audio Connection (pages 25 to 29)

A

No additional settings are needed.

B-1

Item	You select	Page
DISTANCE BALANCE LEVEL	Set according to the connected speakers	91

- If the sound distorts even when the volume is turned down, set "AUDIO ATT" to "ON" (page 88).

B-2 C-2 D-2

Item	You select	Page
DOWNMIX	DOLBY SURROUND	88
DIGITAL OUT	ON	88

- Set "48kHz/96kHz PCM" to "96kHz/24bit," only if you connect an amplifier (receiver) that conforms to 96 kHz digital audio input (page 89).

continued

C-1 D-1

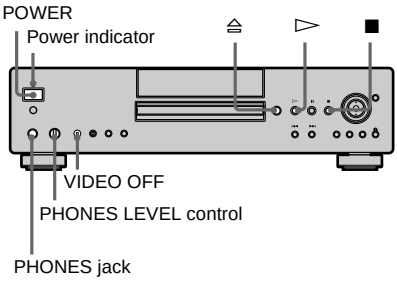
Item	You select	Page
DOWNMIX	DOLBY SURROUND	88

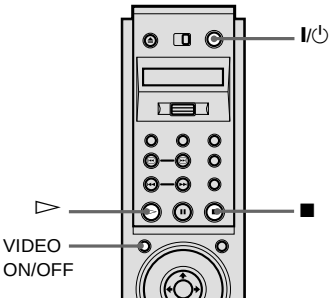
• If the sound distorts even when the volume is turned down, set “AUDIO ATT” to “ON” (page 88).

Playing Discs

DVD VIDEO DVD-RW VIDEO CD SACD CD

Depending on the DVD or VIDEO CD, some operations may be different or restricted. Refer to the operating instructions supplied with your disc.





1 **Turn on your TV.**

2 **Switch the input selector on the TV to the player.**

When using an amplifier (receiver)

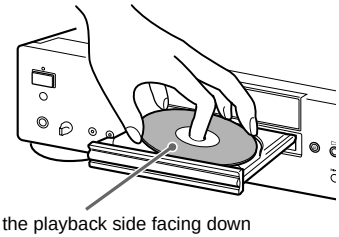
Turn on the amplifier (receiver) and select the appropriate channel.

3 **Press POWER on the player.**

The player enters standby mode and the power indicator lights up in red.

4 **Press ⏏ on the player, and place a disc on the disc tray.**

The player automatically turns on and the power indicator lights up in green.



With the playback side facing down

5 **Press ▷.**

The disc tray closes, and the player starts playback (continuous play). Adjust the volume on the TV or the amplifier (receiver).

After following Step 5

Depending on the disc, a menu may appear on the TV screen. You can play the disc interactively by following the instructions on the menu. DVD VIDEO (page 40), VIDEO CD (page 42).

To turn on the player

Press POWER on the player. The player enters standby mode and the power indicator lights up in red. Press I/⏻ on the remote. The player turns on and the power indicator lights up in green. In standby mode, the player also turns on by pressing ⏏ on the player or by pressing ▷.

To turn off the player

Press I/⏻ on the remote. The player enters standby mode and the power indicator lights up in red. To turn off the player completely, press POWER on the player. While playing a disc, do not turn off the player by pressing POWER. Doing so may cancel the menu settings. When you turn off the player, first press ■ to stop playback and then press I/⏻ on the remote.

continued

To use headphones

Connect headphones to the PHONES jack and adjust the headphones' volume by turning PHONES LEVEL.

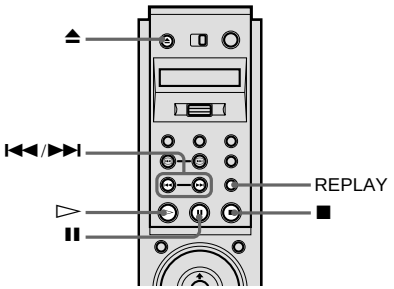
To use the VIDEO ON/OFF button

You can switch the video output on or off. Press VIDEO ON/OFF (or VIDEO OFF on the player) to switch the video output off. When no video signal output from the player, the VIDEO OFF indicator lights up on the player.

Note

SACD audio signals are not output from the digital jack.

Additional operations



To	Operation
Stop	Press ■
Pause	Press ❚❚
Resume play after pause	Press ❚❚ or ▷
Go to the next chapter, track or scene in continuous play mode	Press ⏭
Go back to the preceding chapter, track or scene in continuous play mode	Press ⏮
Stop play and remove the disc	Press ⏏
Replay the previous scene (DVD VIDEO only)	Press REPLAY

The Replay function is useful when you want to review a scene or dialog that you missed.

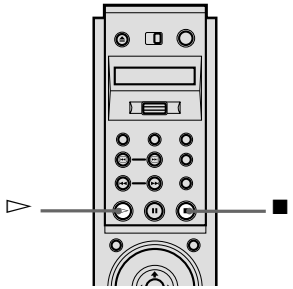
Note

You may not be able to use the Replay function with some scenes.

Resuming Playback from the Point Where You Stopped the Disc (Resume Play)

DVD VIDEO DVD-RW VIDEO CD SACD CD

When you stop the disc, the player remembers the point where you pressed ■ and "RESUME" appears on the front panel display. As long as you do not open the disc tray, Resume Play works even if the player enters standby mode by pressing I/⏻.



1 **While playing a disc, press ■ to stop playback.**

"RESUME" appears on the front panel display and you can restart the disc from the point where you stopped the disc.

If "RESUME" does not appear, Resume Play is not available.

2 **Press ▷.**

The player starts playback from the point where you stopped the disc in Step 1.

To play from the beginning of the disc, press ■ twice, then press ▷.

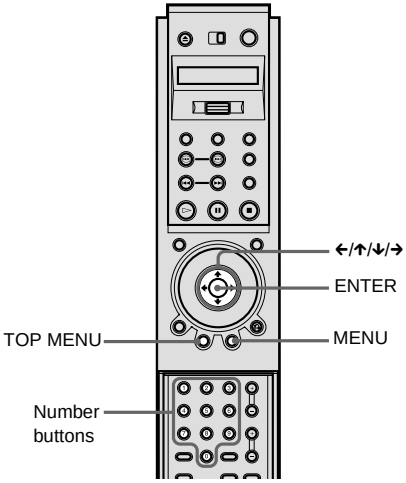
Notes

- Depending on where you stopped the disc, the player may not resume playback from exactly the same point.
- The point where you stopped playing is cleared when:
  - —you turn the power off by pressing POWER on the player.
  - —you change the play mode.
  - —you change the settings on the Setup Display.

Using the DVD's Menu

DVD VIDEO

A DVD is divided into long sections of a picture or a music feature called "titles." When you play a DVD which contains several titles, you can select the title you want using the TOP MENU button.
When you play DVDs that allow you to select items such as the language for the subtitles and the language for the sound, select these items using the MENU button.



1 **Press TOP MENU or MENU.**
The disc's menu appears on the TV screen.
The contents of the menu vary from disc to disc.

2 **Press ←/↑/↓/→ or the number buttons to select the item you want to play or change.**

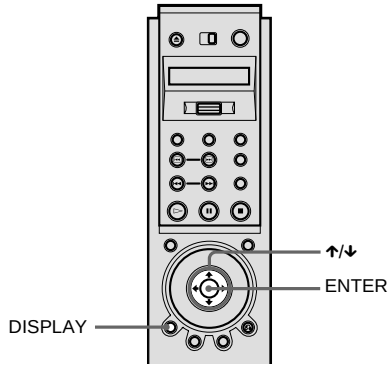
3 **Press ENTER.**

You can also display the disc's menu by pressing TOP MENU or MENU on the player.

Selecting "ORIGINAL" or "PLAY LIST" on a DVD-RW Disc

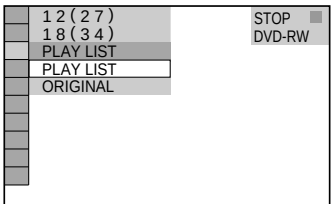
DVD-RW

Some DVD-RW discs in VR (Video Recording) mode have two types of titles for playback: originally recorded titles (ORIGINAL) and titles that can be created on recordable DVD players for editing (PLAY LIST). You can select the type of titles to be played.



1 **Press DISPLAY in stop mode.**
The Control Menu appears.

2 **Press ↑/↓ to select (ORIGINAL/PLAY LIST), then press ENTER.**
The options for "ORIGINAL/PLAY LIST" appear.



3 **Press ↑/↓ to select the setting.**

- PLAY LIST: plays the titles created from "ORIGINAL" for editing.
- ORIGINAL: plays the titles originally recorded.

4 **Press ENTER.**

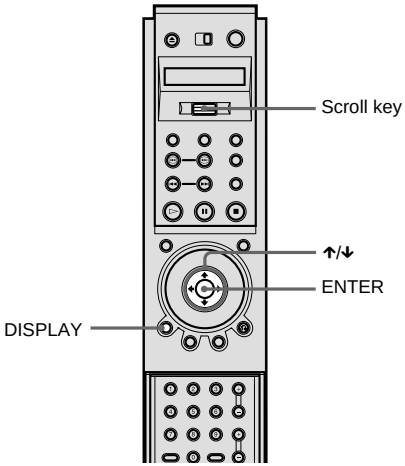
To turn off the Control Menu

Press DISPLAY repeatedly until the Control Menu is turned off.

Note

Repeat Play and A-B Repeat Play work only within the titles of the selected type.

Selecting a Playback Area for an SACD Disc SACD



Selecting a playback area on a 2 channel + multi-channel SACD

Some SACDs consist of a 2 channel playback area and a multi-channel playback area. You can select the playback area you want to listen to.

1 **Toggle the scroll key up or down so that "MULTI/2CH" appears in the LCD screen.**

2 **Press down on the scroll key repeatedly to select "MULTI" for a multi-channel playback area or "2CH" for a 2 channel playback area.**

"MULTI" appears in the front panel display when playing a Multi-channel playback area.

continued

To select a playback area using the Control Menu

1 Press DISPLAY.
The Control Menu appears.

2 Press ↑/↓ to select 2CH (MULTI/2CH), then press ENTER.

3 Press ↑/↓ to select the playback area, "MULTI" or "2CH," then press ENTER.

To turn off the Control Menu

Press DISPLAY repeatedly until the Control Menu is turned off.

Selecting a playback layer when playing a hybrid SACD

Some SACDs consist of an HD layer and a CD layer. You can select the playback layer you want to listen to.

1 While the disc is stopped, toggle the scroll key up or down so that "SACD/CD" appears in the LCD screen.

2 Press down on the scroll key repeatedly to select "SACD" for an HD layer or "CD" for a CD layer.
When playing the CD layer, "CD" appears in the front panel display.

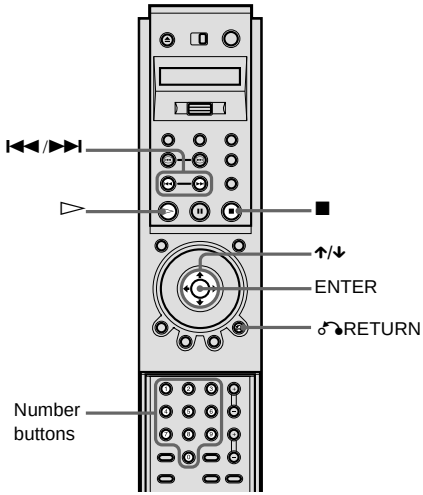
Notes

- For details about SACD discs, see page 97 (Super Audio CD).
- Each play mode function works only within the selected layer or playback area.

Playing VIDEO CDs with PBC Functions (PBC Playback)

VIDEO CD

With PBC (Playback Control) functions, you can enjoy simple interactive operations, search functions, and other such operations. PBC playback allows you to play VIDEO CDs interactively by following the menu on the TV screen.



1 Start playing a VIDEO CD with PBC functions.
The menu for your selection appears.

2 Select the item number you want by pressing ↑/↓ or the number buttons.

3 Press ENTER.

4 Follow the instructions in the menu for interactive operations.
Refer to the instructions supplied with the disc, as the operating procedure may differ depending on the VIDEO CD.

To go back to the menu

Press ↶ RETURN.

To play without using PBC, press ⏮/⏭ or the number buttons while the player is stopped to select a track, then press ▷ or ENTER.
"Play without PBC" appears on the TV screen and the player starts continuous play. You cannot play still pictures such as a menu.
To return to PBC playback, press ■ twice then press ▷.

Note

Depending on the VIDEO CD, "Press ENTER" in Step 3 may appear as "Press SELECT" in the instructions supplied with the disc. In this case, press ▷.

Various Play Mode Functions (Program Play, Shuffle Play, Repeat Play, A-B Repeat Play)

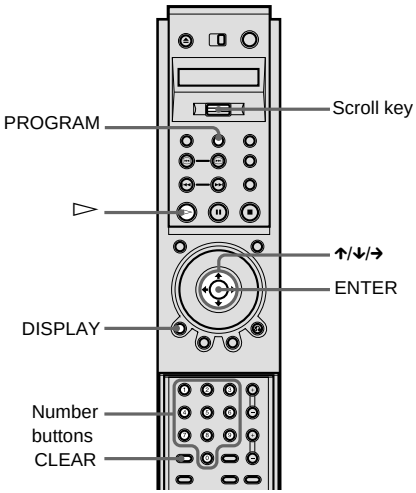
You can set the following play modes:
- Program Play (page 43)
- Shuffle Play (page 45)
- Repeat Play (page 46)
- A-B Repeat Play (page 47)

Note

The play mode is canceled when:
- —you open the disc tray.
- —the player enters standby mode by pressing I/⏻ on the remote.
- —you turn the power off by pressing POWER on the player.

Creating your own program (Program Play) DVD VIDEO VIDEO CD SACD CD

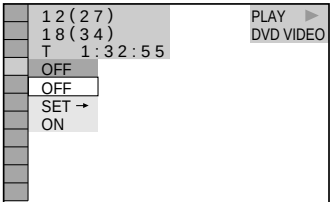
You can play the contents of a disc in the order you want by arranging the order of the titles, chapters, or tracks on the disc to create your own program. You can program up to 99 titles, chapters, and tracks.



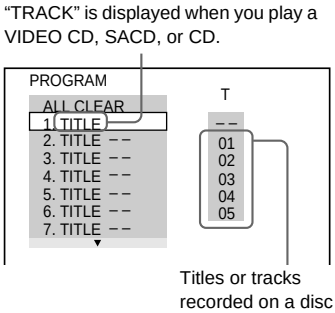
continued

1 **Press DISPLAY twice (when playing an SACD/CD, press once).**
The Control Menu appears.

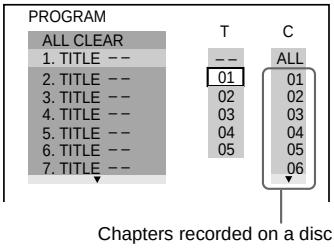
2 **Press ↑/↓ to select (PROGRAM), then press ENTER.**
The options for “PROGRAM” appear.



3 **Press ↑/↓ to select “SET →,” then press ENTER.**
The display for programming appears.



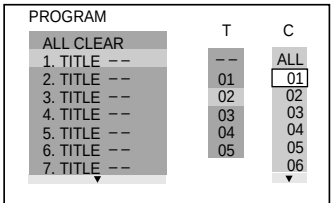
4 **Press →.**
The cursor moves to the title or track (in this case, “01”).



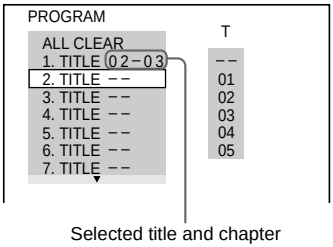
5 **Select the title, chapter, or track you want to program.**

■When playing a DVD VIDEO

For example, select chapter “03” of title “02.”
Press ↑/↓ or the number buttons to select “02” under “T,” then press ENTER.

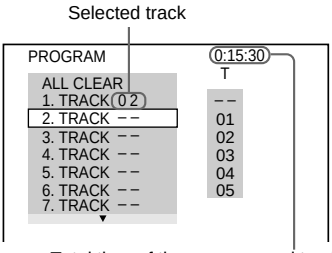


Next, press ↑/↓ or the number buttons to select “03” under “C,” then press ENTER.



■When playing a VIDEO CD, SACD, or CD

For example, select track “02.”
Press ↑/↓ or the number buttons to select “02” under “T,” then press ENTER.
A track number may be displayed in 3 digits for an SACD.



6 To program other titles, chapters, or tracks, repeat Steps 4 to 5.
The programmed titles, chapters, and tracks are displayed in the selected order.

7 Press ▷ to start Program Play.
Program Play begins.
When the program ends, you can restart the same program again by pressing ▷.

To return to normal play

Press CLEAR, or select "OFF" in Step 3. To play the same program again, select "ON" in Step 3 and press ▷.

To turn off the Control Menu

Press DISPLAY repeatedly until the Control Menu is turned off.

To change or cancel a program

1 Follow Steps 1 through 3 of "Creating your own program (Program Play)."
2 Select the program number of the title, chapter, or track you want to change or cancel using ↑/↓ or the number buttons, and press →.
3 Follow Step 5 for new programming. To cancel a program, select "--" under "T," then press ENTER.

To cancel all the titles, chapters, or tracks in the programmed order

1 Follow Steps 1 through 3 of "Creating your own program (Program Play)."
2 Press ↑ and select "ALL CLEAR."
3 Press ENTER.

You can do Repeat Play or Shuffle Play of the programmed titles, chapters, or tracks. During the Program Play, toggle the scroll key up or down to select "REPEAT" or "SHUFFLE" and press down on the scroll key. Or set "REPEAT" or "SHUFFLE" to "ON" using the Control Menu display.

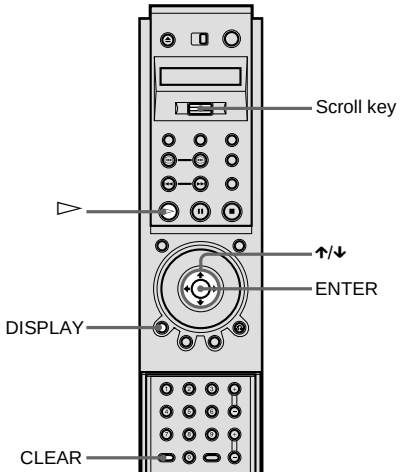
You can select "PROGRAM" directly by pressing PROGRAM.

Note

The number of titles, chapters, or tracks displayed are the same as the number of titles, chapters, or tracks recorded on a disc.

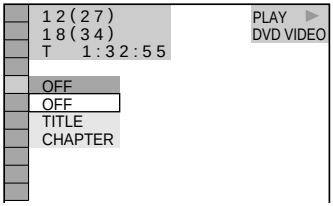
Playing in random order (Shuffle Play) DVD VIDEO VIDEO CD SACD CD

You can have the player "shuffle" titles, chapters, or tracks and play them in random order. Subsequent "shuffling" may produce a different playing order.



1 Press DISPLAY twice during playback (When playing an SACD/CD, press once).
The Control Menu appears.

2 Press ↑/↓ to select (SHUFFLE), then press ENTER.
The options for "SHUFFLE" appear.



continued

3 **Press ↑/↓ to select the item.**

■When playing a DVD VIDEO (Program Play is set to "OFF")

- TITLE: shuffles titles and plays them in random order.
- CHAPTER: shuffles chapters and plays them in random order.

■When playing a VIDEO CD/ SACD/CD (Program Play is set to "OFF")

- TRACK: shuffles tracks and plays them in random order.

■When Program Play is set to "ON"

- ON: shuffles titles or tracks selected in Program Play and plays them in random order.

4 **Press ENTER.**

To return to normal play

Press CLEAR or select "OFF" in Step 3.

To turn off the Control Menu

Press DISPLAY repeatedly until the Control Menu is turned off.

You can set Shuffle Play while the player is stopped. After selecting the "SHUFFLE" option, press ▷. Shuffle Play starts.

You can use the LCD and scroll key on the remote to select Shuffle Play. Toggle the scroll key up or down so that "SHUFFLE" appears in the LCD screen. Then press down on the scroll key repeatedly to select an option.

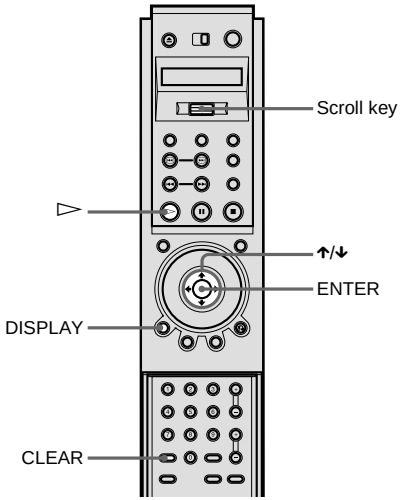
Note

Up to 200 chapters in a disc can be played in random order when "CHAPTER" is selected.

Playing repeatedly (Repeat Play)

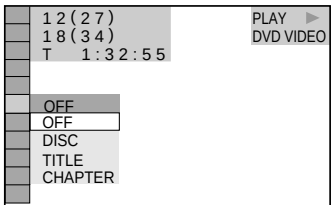
DVD VIDEO DVD-RW VIDEO CD SACD CD

You can play all of the titles or tracks on a disc or a single title, chapter, or track repeatedly.
You can use a combination of Shuffle or Program Play modes.



1 **Press DISPLAY twice during playback (when playing an SACD/CD, press once).**
The Control Menu appears.

2 **Select (REPEAT) using ↑/↓, then press ENTER.**
The options for "REPEAT" appear.



3 **Press ↑/↓ to select the item.**

■When playing a DVD VIDEO (Program Play and Shuffle Play are set to "OFF")

- DISC: repeats all of the titles.
- TITLE: repeats the current title on a disc.
- CHAPTER: repeats the current chapter.

■When playing a DVD-RW

- DISC: repeats all the titles of the selected type.
- TITLE: repeats the current title on a disc.
- CHAPTER: repeats the current chapter.

■When playing a VIDEO CD/ SACD/CD (Program Play and Shuffle Play are set to "OFF")

- DISC: repeats all of the tracks.
- TRACK: repeats the current track.

■When Program Play is set to "ON" or Shuffle Play is activated

- ON: repeats Program Play or Shuffle Play.

4 **Press ENTER.**

To return to normal play

Press CLEAR, or select "OFF" in Step 3.

To turn off the Control Menu

Press DISPLAY repeatedly until the Control Menu is turned off.

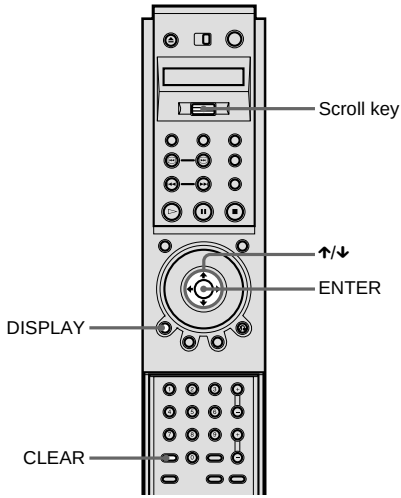
You can set Repeat Play while the player is stopped. After selecting the "REPEAT" option, press ▷. Repeat Play starts.

You can use the LCD and scroll key on the remote to select Repeat Play. Toggle the scroll key up or down so that "REPEAT" appears in the LCD screen. Then press down on the scroll key repeatedly to select an option.

Repeating a specific portion (A-B Repeat Play)

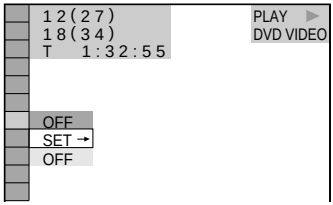
DVD VIDEO DVD-RW VIDEO CD SACD CD

You can play a specific portion of a title, chapter or track repeatedly. (This function is useful when you want to memorize lyrics, etc.)



1 **Press DISPLAY twice during playback (when playing an SACD/CD, press once).**
The Control Menu appears.

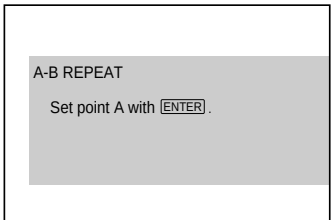
2 **Press ↑/↓ to select (A-B) (A-B REPEAT), then press ENTER.**
The options for "A-B REPEAT" appear.



continued

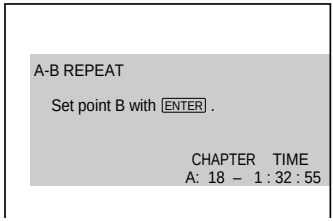
3 Press ↑/↓ to select "SET →," then press ENTER.

The "A-B REPEAT" setting display appears.



4 During playback, when you find the starting point (point A) of the portion to be played repeatedly, press ENTER.

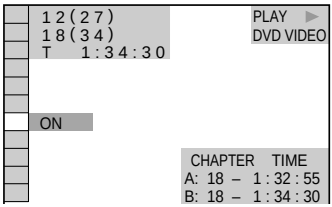
The starting point (point A) is set.



5 When you reach the ending point (point B), press ENTER again.

The set points are displayed and the player starts repeating this specific portion.

"A-B" appears on the front panel display during A-B Repeat Play.



To return to normal play

Press CLEAR, or select "OFF" in Step 3.

To turn off the Control Menu

Press DISPLAY repeatedly until the Control Menu is turned off.

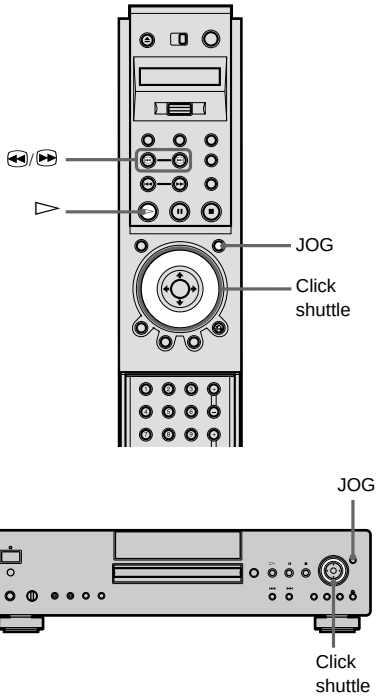
You can use the LCD and scroll key on the remote to select A-B Repeat. Toggle the scroll key up or down so that "A-B" appears in the LCD screen. Then press down on the scroll key once to set point A. Press it again to set point B.

Notes

- You can set A-B Repeat Play for only one specific section.
- When you set A-B Repeat Play, the settings for Shuffle Play, Repeat Play, and Program Play are canceled.
- A-B Repeat Play does not work for titles containing still pictures on a DVD-RW in VR mode.

Searching for a Particular Point on a Disc (Search, Scan, Slow-motion Play, Freeze Frame)

You can quickly locate a particular point on a disc by monitoring the picture or playing back slowly.



Note

Depending on the DVD/VIDEO CD, you may not be able to do some of the operations described.

Locating a point quickly (Search)

DVD VIDEO DVD-RW VIDEO CD SACD CD

During playback, keep pressing ⏩ to locate a point in the playback direction or keep pressing ⏪ to locate a point in the opposite direction. When you find the point you want, release the button to return to normal playback speed.

Using the Click shuttle (Shuttle mode)

DVD VIDEO DVD-RW VIDEO CD SACD CD

Turn the click shuttle. The playback speed changes depending on the turning direction and degree of rotation as follows:

During playback

FF2▶▶ Fast forward (faster than FF1▶▶)
↕
FF1▶▶ Fast forward
↕
×2▶ (DVD VIDEO/SACD/CD only)
↕
PLAY▶ (normal speed)
↕
×2◀ (DVD VIDEO only)
↕
FR1◀◀ Fast rewind
↕
FR2◀◀ Fast rewind (faster than FR1◀◀)

If you turn the click shuttle quickly, the playback speed goes to "FF2▶▶" or "FR2◀◀" at once.

During pause mode (DVD VIDEO, DVD-RW only)

SLOW1▮▶ Slow (playback direction)
↕
SLOW2▮▶ Slow (playback direction – slower than SLOW1▮▶)
↕
PAUSE▮▮ Pause
↕
SLOW2◀▮ Slow (opposite direction – slower than SLOW1◀▮) (DVD VIDEO only)
↕
SLOW1◀▮ Slow (opposite direction) (DVD VIDEO only)

continued

During pause mode (VIDEO CD only)

SLOW1 ▮► Slow (playback direction)
↕
SLOW2 ▮► Slow (playback direction – slower than SLOW1 ▮►)
↕
PAUSE ▮▮ Pause

To return to Continuous Play

Press ▷.

Playing a disc frame by frame (Jog mode) DVD VIDEO DVD-RW VIDEO CD

1 Press JOG.

"JOG" appears in the LCD screen on the remote. The picture on the screen pauses if you press JOG on the player.

2 Turn the click shuttle.

Depending on the turning speed, playback goes to frame-by-frame playback in the direction that the click shuttle is turned. Turn the click shuttle clockwise to go forward, and counterclockwise to rewind (DVD VIDEO only). If you turn the click shuttle at a constant speed for a while, the playback speed goes to slow or normal.

To return to Continuous Play

Press ▷.

To turn off the Jog mode

Press JOG again so that "JOG" disappears from the LCD screen. If you press JOG on the player, the indicator turns off.

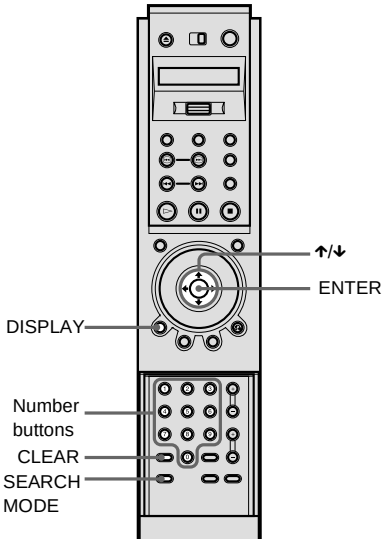
Notes

- The "JOG" indicator in the LCD on the remote shows the current state of the click shuttle. For example, even if the JOG indicator on the player is lit, the click shuttle on the remote returns to Shuttle mode when "JOG" disappears from the LCD screen.
- If you do not operate the click shuttle for about 20 seconds after pressing JOG, it returns to shuttle mode on the remote. On the player, it stays in jog mode.

Searching for a Title/ Chapter/Track/Index/ Scene

DVD VIDEO DVD-RW VIDEO CD SACD CD

You can search a DVD by title or chapter, and you can search a VIDEO CD/SACD/CD by track, index, or scene. As titles and tracks are assigned unique numbers on the disc, you can select the desired one by entering its number. Or, you can search for a scene using the time code (Time search).



1 Press DISPLAY.

The Control Menu appears.

2 Press ↑/↓ to select the search method.

■When playing a DVD VIDEO/ DVD-RW

(TITLE), (CHAPTER), (TIME/TEXT), or (TIME/MEMO)

Select “TIME/TEXT” or “TIME/MEMO” for “Time search” (see below).

■When playing a VIDEO CD

(TRACK) or (INDEX)

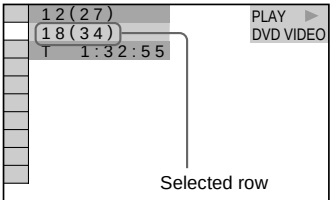
■When playing a VIDEO CD with PBC Playback

(SCENE)

■When playing an SACD/CD

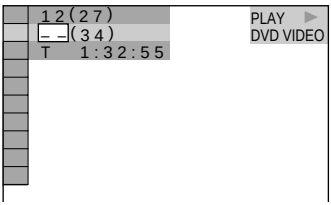
(TRACK) or (INDEX)

Example: when you select (CHAPTER)
“** (**)” is selected (** refers to a number).
The number in parentheses indicates the total number of titles, chapters, tracks, indexes or scenes.



3 **Press ENTER.**

“** (**)” changes to “-- (**).”



4 **Press ↑/↓ or the number buttons to select the title, chapter, track, index, or scene number you want to search.**

If you make a mistake

Cancel the number by pressing CLEAR, then select another number.

5 **Press ENTER.**

The player starts playback from the selected number.

To turn off the Control Menu

Press DISPLAY repeatedly until the Control Menu is turned off.

To search for a scene using the time code (Time search) (DVD VIDEO/DVD-RW only)

1 In Step 2, select (TIME/TEXT) or (TIME/MEMO).
“T **:**:**” (playing time of the current title) is selected.

2 Press ENTER.
“T **:**:**” changes to “T --:--:--.”

3 Input the time code using the number buttons, then press ENTER.
For example, to find the scene at 2 hours, 10 minutes, and 20 seconds after the beginning, just enter “2:10:20.”

You can select “TITLE,” “CHAPTER,” “TRACK,” “INDEX,” “SCENE,” or “TIME/TEXT” directly by pressing SEARCH MODE repeatedly.

When the Control Menu display is turned off, you can search for a chapter (DVD VIDEO/DVD-RW) or track (SACD/CD) by pressing the number buttons and ENTER.

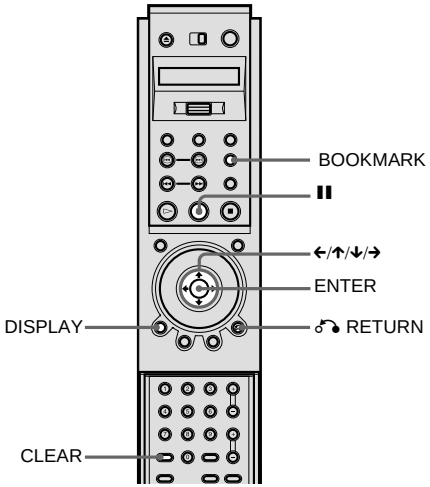
You can display the first scene of titles, chapters, or tracks recorded on the disc on a screen divided into 9 sections. You can start playback directly by selecting one of the scenes. For details, see below.

Notes

- The title, chapter or track number displayed is the same number recorded on the disc.
- You cannot search for a still picture on a DVD-RW in VR mode.

Searching by Scene (VIEWER)

You can divide the screen into 9 subscreens and find the desired scene quickly.

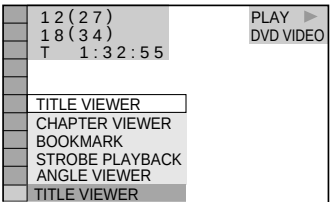


1 Press DISPLAY twice during playback.

The Control Menu appears.

2 Press ↑/↓ to select (VIEWER), then press ENTER.

The options for "VIEWER" appear.



3 Press ↑/↓ to select the item.

Refer to the explanations given for each item in the following sections.

- TITLE VIEWER (for DVD VIDEO only)
- CHAPTER VIEWER (for DVD VIDEO only)
- BOOKMARK
- TRACK VIEWER (for VIDEO CD only)
- STROBE PLAYBACK
- ANGLE VIEWER (for DVD VIDEO only)

4 Press ENTER.

To start playback from the selected scene or angle

Select the scene using ←/↑/↓/→ and press ENTER. The playback starts from the selected scene or angle.

To return to normal play

Press ↩ RETURN.

To turn off the Control Menu

Press DISPLAY repeatedly until the Control Menu is turned off.

Notes

- Depending on the disc, you may not be able to select all functions.
- The sound is muted when using this function.

Scanning the title, chapter, or track

DVD VIDEO VIDEO CD

You can divide the screen into 9 subscreens and display the first scene of titles, chapters, or tracks. You can also play back from the selected title, chapter, or track.

Select the item you want in Step 3, then press ENTER in Step 4.

■When playing a DVD VIDEO

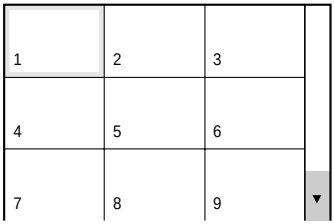
Select "TITLE VIEWER" or "CHAPTER VIEWER".

■When playing a VIDEO CD

Select "TRACK VIEWER".

The initial scenes of titles, chapters, or tracks appear.

If there are more than 9 titles, chapters, or tracks, ▼ is displayed at the bottom right.
To display the additional titles, chapters, or tracks, select the bottom right scene (the position 9) and press ↓. To return to the previous scene, select the top left scene (the position 1) and press ↑.



Setting and selecting a favorite scene (Bookmark) DVD VIDEO VIDEO CD

You can have the player store specific portions of the disc in memory and play them immediately whenever you want (Bookmark). Up to 9 bookmarks per disc for a total of 200 discs can be stored in memory.

Select “BOOKMARK” in Step 3, then press ENTER in Step 4.
The bookmarked scenes are displayed on a screen divided into 9 sections.

To set a bookmark

During playback, press BOOKMARK when you find a scene to be bookmarked.

To start playback from the bookmarked scene

Select the bookmark using ←/↑/↓/→, then press ENTER.

To reset the bookmark

Select the bookmark you want to reset using ←/↑/↓/→, then press CLEAR.

To reset all the bookmarks for the player

Select “BOOKMARK RESET —→” of “CUSTOM SETUP” in the Setup Display (page 86).

The number of the bookmark you selected is displayed on the front panel display.

Notes

- The player can store the bookmarks of up to 200 discs in memory. When you have the player store over 200 discs in memory, bookmarks of the oldest disc are erased.
- Do not turn off the player by pressing POWER during playback. Doing so may erase the bookmarks previously stored in memory.

Dividing a scene into 9 sections (STROBE PLAYBACK)

DVD VIDEO VIDEO CD

You can display 9 consecutive moving pictures on the screen. When you press ❚❚, the moving pictures pause.

Select “STROBE PLAYBACK” in Step 3, then press ENTER in Step 4.

Displaying different angles simultaneously DVD VIDEO

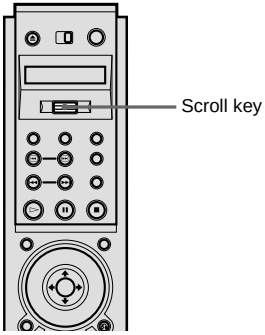
If various angles (multi-angles) for a scene are recorded on the DVD VIDEO, you can display all of the angles recorded on the disc on the same screen. The angles are displayed on a screen divided into 9 sections.

Select “ANGLE VIEWER” in Step 3, then press ENTER in Step 4.

Viewing the Playing Time and Remaining Time on the Front Panel Display

DVD VIDEO DVD-RW VIDEO CD SACD CD

You can check information about the disc, such as the remaining time, current title number, or track using the front panel display (page 9).

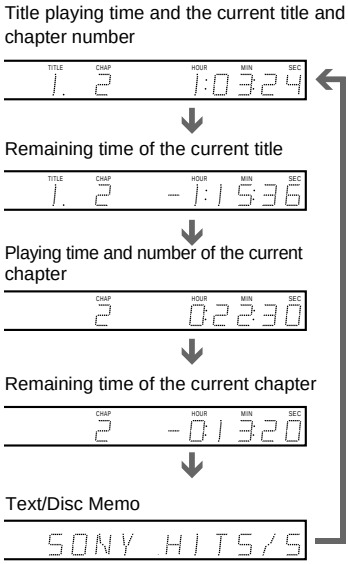


1 **Toggle the scroll key up or down so that "TIME/TEXT" appears in the LCD screen.**

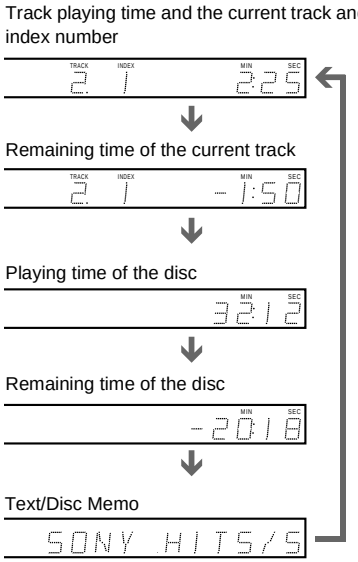
2 **Press down on the scroll key repeatedly.**

Each time you press down on the scroll key, the display changes as shown in the following charts.

When playing a DVD VIDEO or DVD-RW


Title playing time and the current title and chapter number
TITLE CHAP HOUR MIN SEC
1 2 1:03:24
Remaining time of the current title
TITLE CHAP HOUR MIN SEC
1 2 -1:15:36
Playing time and number of the current chapter
CHAP HOUR MIN SEC
2 0:22:30
Remaining time of the current chapter
CHAP HOUR MIN SEC
2 -0:13:20
Text/Disc Memo
SONY HITS/S

When playing a VIDEO CD (without PBC functions), SACD, or CD



When playing VIDEO CDs with PBC functions, the scene number and the playing time are displayed.

The playing time and remaining time of the current chapter, title, track, scene, or disc will also appear on your TV screen. See the following section "Checking the Playing Time and Remaining Time" for instructions on how to read this information.

The DVD/SACD/CD text or Disc Memo may also appear on your TV screen. See "Labeling the disc" (page 71) for more information.

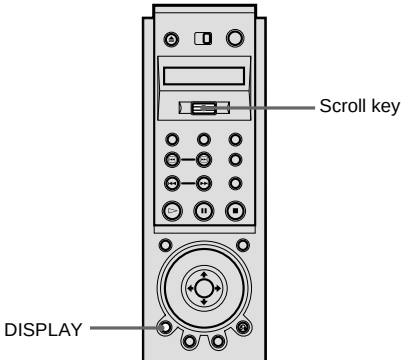
Note

Depending on the type of disc being played and the playing mode, the above mentioned disc information may not be displayed.

Checking the Playing Time and Remaining Time

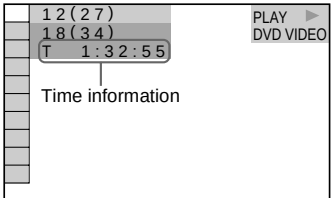
DVD VIDEO DVD-RW VIDEO CD SACD CD

You can check the playing time and remaining time of the current title, chapter, or track, in addition to the playing time and remaining time of the disc. Also, you can check the Disc Memo or DVD/SACD/CD text recorded on the disc.



1 Press DISPLAY during playback.

The Control Menu appears.



2 Toggle the scroll key up or down so that "TIME/TEXT" appears in the LCD screen.

continued

3 Press down on the scroll key repeatedly to change the time information.

The display and the kinds of time that you can change depend on the disc you are playing.

■When playing a DVD VIDEO or DVD-RW

- T **:**:**
  Playing time of the current title
- T–**:**:**
  Remaining time of the current title
- C **:**:**
  Playing time of the current chapter
- C–**:**:**
  Remaining time of the current chapter

■When playing a VIDEO CD (with PBC functions)

- **:**
  Playing time of the current scene

■When playing a VIDEO CD (without PBC functions), SACD, or CD

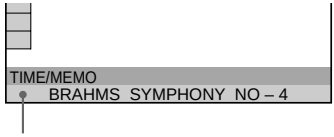
- T **:**
  Playing time of the current track
- T–**:**
  Remaining time of the current track
- D **:**
  Playing time of the current disc
- D–**:**
  Remaining time of the current disc

To turn off the Control Menu

Press DISPLAY repeatedly until the Control Menu is turned off.

To check the Disc Memo or text

Press down on the scroll key repeatedly in Step 3 to display the Disc Memo or text recorded on the DVD/SACD/CD. The DVD/SACD/CD text appears only when text is recorded in the disc. If the disc does not contain text, “NO TEXT” appears. In this case, you can label the disc. To label the disc, see page 71.



Disc Memo or DVD/SACD/CD text

You can see the entire DVD/SACD/CD text or Disc Memo by watching it scroll across the front panel display.

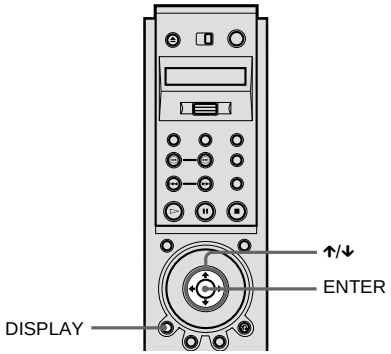
Notes

- The player can only display the first level of the DVD/SACD/CD text, such as the disc name or title.
- Depending upon the disc, the text may not be displayed.

Checking the Play Information (ADVANCED)

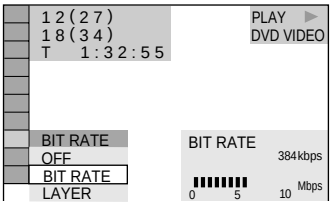
DVD VIDEO DVD-RW

You can check information such as the bit rate or the disc layer that is being played. While playing a disc, an approximate bit rate of the playback picture is always displayed as Mbps (Mega bit per second) and the audio as kbps (kilo bit per second).



1 **Press DISPLAY during playback.**
The Control Menu is displayed.

2 **Press ↑/↓ to select (ADVANCED), then press ENTER.**
The options for "ADVANCED" appear.



3 **Press ↑/↓ to select items.**
For each item, please refer to "Displays of each item."
- BIT RATE: displays the bit rate.
- LAYER: displays the layer and the pick-up point.

4 **Press ENTER.**

To close the ADVANCED window

Select "OFF" in Step 3.

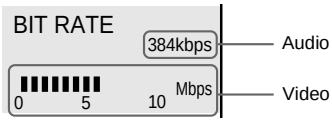
To turn off the Control Menu

Press DISPLAY repeatedly until the Control Menu is turned off.

Displays of each item

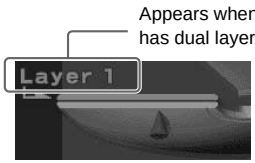
By pressing DISPLAY repeatedly, you can display either "BIT RATE" or "LAYER," whichever was selected in "ADVANCED."

BIT RATE



Bit rate refers to the amount of video/audio data per second in a disc. The higher the bit rate, the larger the amount of data. When the bit rate level is high, there is a large amount of data. However, this does not always mean that you can get higher quality pictures or sounds.

LAYER

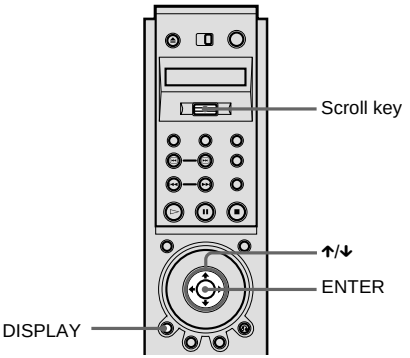


Indicates the approximate point where the disc is playing.
If it is a dual-layer DVD, the player indicates which layer is being read ("Layer 0" or "Layer 1").
For details on the layers, see page 97 (DVD VIDEO).

Changing the Sound

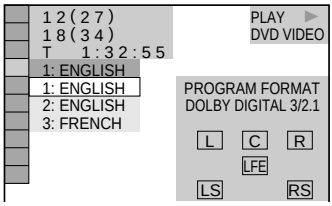
DVD VIDEO DVD-RW VIDEO CD CD

If the DVD VIDEO is recorded with multilingual tracks, you can select the language you want while playing the DVD VIDEO.
When the DVD VIDEO is recorded in multiple audio formats (PCM, Dolby Digital, or DTS), you can select the audio format while playing the DVD VIDEO.
With CDs or VIDEO CDs, you can select the sound from the right or left channel and listen to the sound of the selected channel through both the right and left speakers. (In this case, the sound loses its stereo effect.) For example, when playing a disc containing a song with the vocals on the right channel and the instruments on the left channel, you can hear the instruments from both speakers by selecting the left channel.



1 **Press DISPLAY during playback.**
The Control Menu is displayed.

2 **Press ↑/↓ to select (AUDIO), then ENTER.**
The options for “AUDIO” appear.



3 **Press ↑/↓ to select the desired audio signal.**

■When playing a DVD VIDEO
Depending on the DVD VIDEO, the choice of language varies.
When 4 digits are displayed, they indicate a language code. Refer to “Language Code List” on page 102 to see which language the code represents.
When the same language is displayed two or more times, the DVD VIDEO is recorded in multiple audio formats.

■When playing a DVD-RW
The types of sound tracks recorded on a disc are displayed. The default setting is underlined.
Example:
- 1: MAIN (main sound)
- 1: SUB (sub sound)
- 1: MAIN+SUB (main and sub sound)

■When playing a VIDEO CD or CD
The default setting is underlined.
- STEREO: The standard stereo sound
- 1/L: The sound of the left channel (monaural)
- 2/R: The sound of the right channel (monaural)

4 **Press ENTER.**

To turn off the Control Menu

Press DISPLAY repeatedly until the Control Menu is turned off.

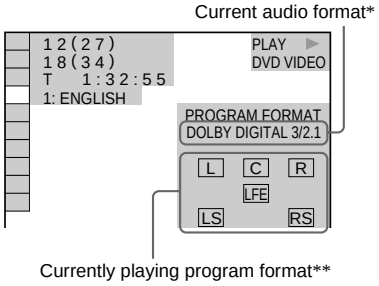
You can use the LCD and scroll key on the remote to select an audio format. Toggle the scroll key up or down so that "AUDIO" appears in the LCD screen. Then press down on the scroll key repeatedly to select one of the audio options.

Notes

- While playing a DVD, the sound may change automatically.
- You cannot change the sound for SACDs.

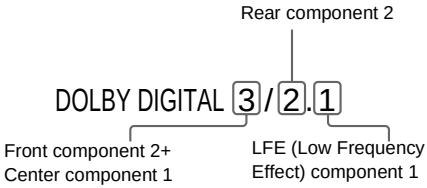
Displaying the audio information of the disc DVD VIDEO

When you select "AUDIO," the channels being played are displayed on the screen. For example, in Dolby Digital format, multiple signals ranging from monaural to 5.1 channel signals can be recorded on a DVD. Depending on the DVD, the number of the recorded channels may differ.



* "PCM," "DTS," or "DOLBY DIGITAL" is displayed.
In the case of "DOLBY DIGITAL," the channels in the playing track are displayed by numbers as follows:

For Dolby Digital 5.1 ch:



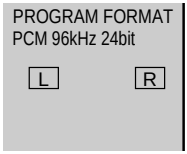
**The letters in the program format display mean the following sound component:

L: Front (left)
R: Front (right)
C: Center
LS: Rear (left)
RS: Rear (right)
S: Rear (monaural): The rear component of the Dolby Surround processed signal and the Dolby Digital signal
LFE: Low Frequency Effect signal

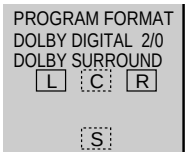
continued

The display examples are as follows:

• PCM (stereo)

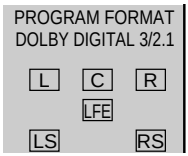


• Dolby Surround



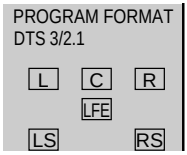
• Dolby Digital 5.1ch

When an LFE signal component is output, “LFE” is enclosed in a solid line. When an LFE signal component is not output, “LFE” is enclosed in a broken line.



• DTS

When an LFE signal component is output, “LFE” is enclosed in a solid line. When an LFE signal component is not output, “LFE” is enclosed in a broken line.

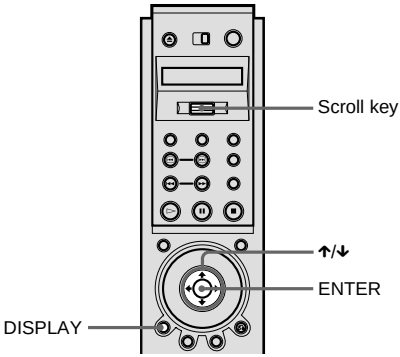


When the signal contains rear signal components such as “LS”, “RS”, or “S”, the surround effect is enhanced (page 60).

SURROUND Mode Settings

DVD VIDEO DVD-RW VIDEO CD CD

You can enjoy surround sounds while playing discs including Dolby Digital and DTS DVDs, even if you have only 2 or 4 speakers. Select the surround mode that best suits your speaker setup.

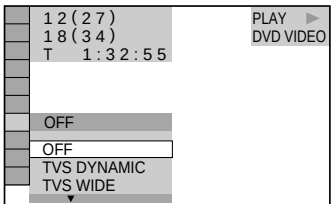


1 **Press DISPLAY during playback.**

The Control Menu appears.

2 **Press ↑/↓ to select (SURROUND), then press ENTER.**

The options for “SURROUND” appear.



3 Press ↑/↓ to select one of the surround modes.

Refer to the following explanations given for each item.

For 2 speaker setups

- TVS DYNAMIC
- TVS WIDE
- TVS NIGHT
- TVS STANDARD

For 4 to 6 speaker setups

(If you select "NONE" in the setting of "REAR" in "SPEAKER SETUP"(page 91), you cannot select these modes.)

- NORMAL SURROUND
- ENHANCED SURROUND
- VIRTUAL REAR SHIFT
- VIRTUAL MULTI REAR
- VIRTUAL MULTI DIMENSION

4 Press ENTER.

To cancel the setting

Select "OFF" in Step 3.

To turn off the Control Menu

Press DISPLAY repeatedly until the Control Menu is turned off.

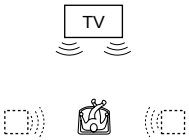
For 2 speaker setups

When you connect only 2 front speakers, TVS (TV Virtual Surround) lets you enjoy surround sound effects by using sound imaging to create virtual rear speakers from the sound of the front speakers (L: left, R: right) without using actual rear speakers. Select one of the following modes:

If the player is set up to output the signal from the DIGITAL OUT (OPTICAL or COAXIAL) jack, the surround effect will be heard only when "DOLBY DIGITAL" and "DTS" are set to "D-PCM" in "AUDIO SETUP"(page 89).

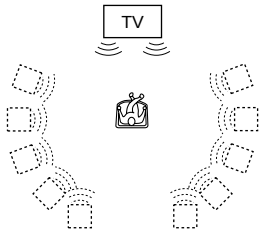
TVS DYNAMIC

Uses sound imaging to create virtual rear speakers from the sound of the front speakers (L, R) without using actual rear speakers (shown below). The sound imaging effect is distinct and clearly reproduces each aural element of the audio track.
This mode is effective when the distance between the front L and R speakers is short, such as with built-in speakers on a stereo TV.



TVS WIDE

Uses sound imaging to create virtual rear speakers from the sound of the front speakers (L, R) without using actual rear speakers. The virtual speakers are reproduced as shown in the illustration below. This gives the sound an expanded effect that fills the area surrounding the listener.
This mode is effective when the distance between the front L and R speakers is short, such as with built-in speakers on a stereo TV.



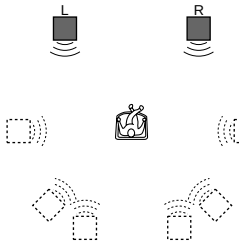
TVS NIGHT

Large sounds, such as explosions, are compressed, but the quieter sounds are unaffected. This feature is useful when you don't want to disturb other people but still want to hear the dialog and enjoy the surround sound effects of "TVS WIDE."

continued

TVS STANDARD

Uses sound imaging to create virtual rear speakers from the sound of the front speakers (L, R) without using actual rear speakers. The virtual speakers are reproduced as shown in the illustration below. Use this setting when you want to use TVS with 2 separate speakers and retain the sound quality.



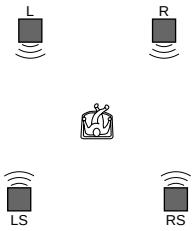
L : Front speaker (left)
R : Front speaker (right)
⬚ : Virtual speaker

For 4 to 6 speaker setups

You can enjoy the following surround effects by using the 2 front speakers and 2 rear speakers.
Connect the player to the amplifier (receiver) with the **B-1** connection (page 25).
You can experience Dolby Surround (Pro Logic) sounds or Digital Cinema Sound (DCS). DCS uses sound imaging to shift the sound of the rear speakers away from the actual speaker position or create entire sets of virtual rear speakers from one set of actual rear speakers. “VIRTUAL REAR SHIFT,” “VIRTUAL MULTI REAR,” and “VIRTUAL MULTI DIMENSION” make use of this technology.

NORMAL SURROUND

Software with 2 channel audio signals is decoded with the Dolby Surround (Pro Logic) decoder to create surround effects. The rear speakers will emit identical monaural sounds. If you are using a center speaker, the appropriate sounds for the center speaker will be delivered.

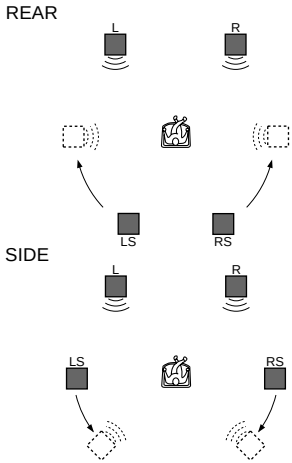


ENHANCED SURROUND

Provides a greater sense of presence from a Dolby Surround (Pro Logic) source with a monaural rear channel signal. Produces a stereo like effect in the rear channels.

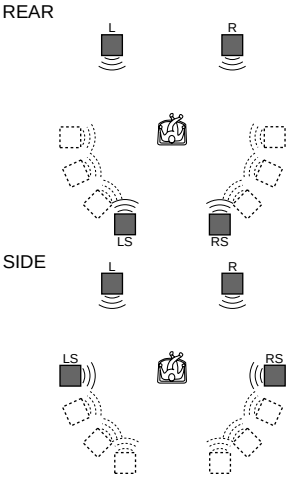
VIRTUAL REAR SHIFT

Uses sound imaging to shift the sound of the rear speakers away from the actual speaker position.
The virtual speakers are reproduced as shown in the illustration below. The shift position differs according to “REAR” or “SIDE” setting of the rear speakers (page 91).



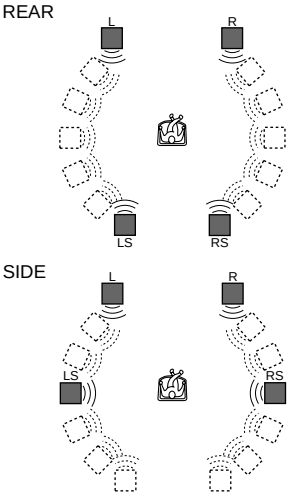
VIRTUAL MULTI REAR

Uses sound imaging to create an array of virtual rear speakers from a single pair of actual rear speakers. The virtual speakers are reproduced as shown in the illustration below. The position of the virtual rear speakers differs according to “REAR” or “SIDE” setting of the rear speakers (page 91).



VIRTUAL MULTI DIMENSION

Uses sound imaging to create an array of virtual rear speaker positions higher than the listener from a single pair of actual rear speakers. This mode creates five sets of virtual speakers surrounding the listener at approximately a 30° angle of elevation. The effect differs according to "REAR" or "SIDE" setting of the rear speakers (page 91).



L : Front speaker (left)
R : Front speaker (right)
LS :Rear speaker (left)
RS :Rear speaker (right)
□ : Virtual speaker

You can use the LCD and scroll key on the remote to select a surround setting. Toggle the scroll key up or down so that "SURROUND" appears in the LCD screen. Then press down on the scroll key repeatedly to select one of the surround sounds.

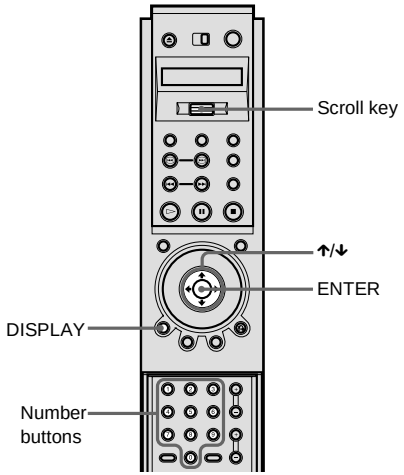
Notes

- To enjoy the multichannel audio through the 5.1CH OUTPUT jacks, correctly set each speaker position and distance. For details on setting each speaker, see page 91.
- When you select an item, the sound cuts off for a moment.
- When the playing signal does not contain a signal for the rear speakers (page 59), the surround effects may be difficult to hear.
- When you select "TVS DYNAMIC," "TVS WIDE," "TVS NIGHT", or "TVS STANDARD," the player does not output the sound from the center speaker.
- When you select one of the surround modes, turn off the surround setting of the connected TV or amplifier (receiver).
- If the player is set up to output the signal from the DIGITAL OUT (OPTICAL or COAXIAL) jack, the TVS effect will not be heard when you play a CD.
- Make sure that your listening position is between and at an equal distance from your speakers, and that the speakers are located in similar surroundings. Otherwise, the TVS effect may be hard to discern.
- "TVS NIGHT" only works with Dolby Digital discs. However, not all discs will respond to the "TVS NIGHT" function in the same way.
- If you use the DIGITAL OUT (OPTICAL or COAXIAL) jack and set "DOLBY DIGITAL" to "DOLBY DIGITAL," "DTS" to "DTS" in "AUDIO SETUP," sound will come from your speakers but it will not have the TVS effect.

Changing the Angles

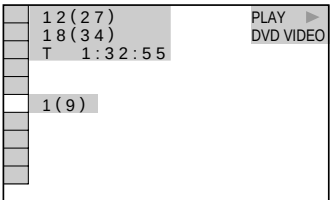
DVD VIDEO

If various angles (multi-angles) for a scene are recorded on the DVD VIDEO, “ANGLE” appears in the front panel display. This means that you can change the viewing angle.
For example, while playing a scene of a train in motion, you can display the view from either the front of the train, the left window of the train or from the right window without having the train’s movement interrupted.

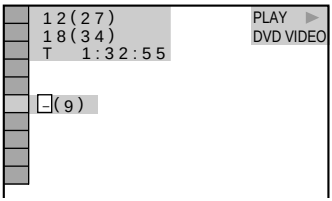


1 **Press DISPLAY during playback.**
The Control Menu appears.

2 **Press ↑/↓ to select (ANGLE).**
The number of the angle appears.
The number in parentheses indicates the total number of angles.



3 **Press → or ENTER.**
The number of the angle changes to “-.”



4 **Select the angle number using the number buttons or ↑/↓, then press ENTER.**
The angle changes to the selected angle.

To turn off the Control Menu

Press DISPLAY repeatedly until the Control Menu is turned off.

You can use the LCD and scroll key on the remote to select an angle. Toggle the scroll key up or down so that “ANGLE” appears in the LCD screen. Then press down on the scroll key repeatedly to select an angle.

You can display all the angles recorded on the disc on the same screen, and start playback directly in continuous mode from the chosen angle. The angles are displayed on a screen divided into 9 sections. For details, see page 52.

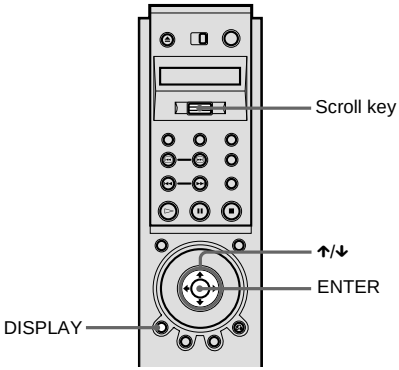
Note

Depending on the DVD VIDEO, you may not be able to change the angles even if multi-angles are recorded on the DVD VIDEO.

Displaying the Subtitles

DVD VIDEO DVD-RW

If subtitles are recorded on the discs, you can turn the subtitles on and off whenever you want while playing. If multilingual subtitles are recorded on the disc, you can change the subtitle language while playing, and turn it on or off whenever you want. For example, you can select the language you want to practice and turn the subtitles on for better understanding.

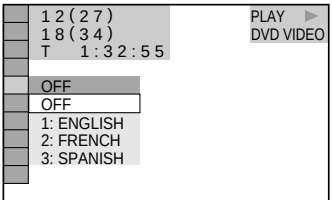


1 **Press DISPLAY during playback.**

The Control Menu appears.

2 **Press ↑/↓ to select (SUBTITLE), then press ENTER.**

The options for “SUBTITLE” appear.



3 **Press ↑/↓ to select the setting.**

■When playing a DVD VIDEO

Select the language.
Depending on the DVD VIDEO, the choice of language varies.
When 4 digits are displayed, they indicate a language code. Refer to “Language Code List” on page 102 to see which language the code represents.

■When playing a DVD-RW

Select “ON.”

4 **Press ENTER.**

To cancel the SUBTITLE setting

Select “OFF” in Step 3.

To turn off the Control Menu

Press DISPLAY repeatedly until the Control Menu is turned off.

You can use the LCD and scroll key on the remote to select a subtitle. Toggle the scroll key up or down so that “SUBTITLE” appears in the LCD screen. Then press down on the scroll key repeatedly to select a setting.

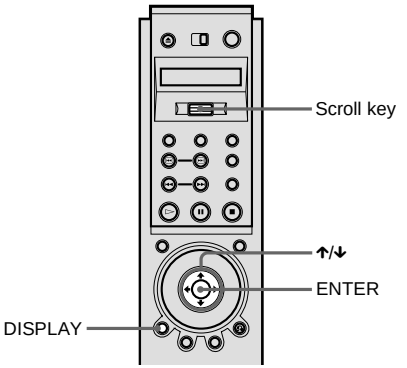
Note

Depending on the DVD VIDEO, you may not be able to change the subtitles even if multilingual subtitles are recorded on it.

Adjusting the Picture Quality (BNR)

DVD VIDEO DVD-RW VIDEO CD

The Block Noise Reduction (BNR) function adjusts the picture quality by reducing the "block noise" or mosaic like patterns that appear on your TV screen.

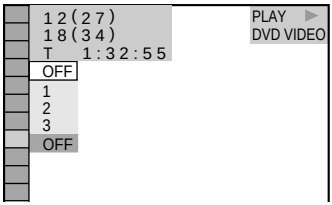


1 Press DISPLAY twice during playback.

The Control Menu appears.

2 Press ↑/↓ to select BNR (BNR), then press ENTER.

The options for "BNR" appear.



3 Press ↑/↓ to select a level.

As the value increases, the mosaic like patterns on your TV screen will decrease.

- 1: reduces the "block noise".
- 2: reduces the "block noise" more than 1.
- 3: reduces the "block noise" more than 2.

4 Press ENTER.

The disc plays with the setting you selected.

To cancel the "BNR" setting

Select "OFF" in Step 3.

To turn off the Control Menu

Press DISPLAY repeatedly until the Control Menu is turned off.

You can use the LCD and scroll key on the remote to select "BNR." Toggle the scroll key up or down so that "BNR" appears in the LCD screen. Then press down on the scroll key repeatedly to select a level.

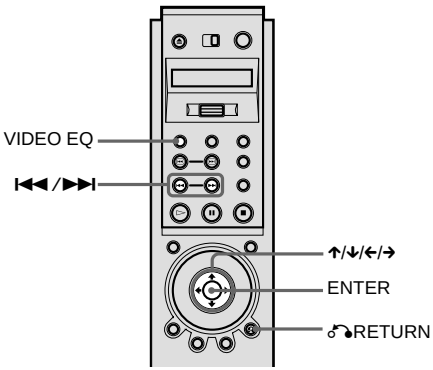
Notes

- If the outlines of the images on your screen should become blurred, set "BNR" to "OFF."
- Depending on the disc or the scene being played, the "BNR" effect may be hard to discern.

Adjusting the Playback Picture (VIDEO EQUALIZER)

DVD VIDEO DVD-RW VIDEO CD

You can adjust the video signal of the DVD or VIDEO CD from the player, not from the TV, to obtain the picture quality you want. Choose the setting that best suits the program you are watching.
When you select "MEMORY," you can make further adjustments to each element of the picture (color, brightness, etc.).



1 **Press VIDEO EQ.**
"STANDARD" appears on the TV screen.

2 **Press VIDEO EQ repeatedly to select the setting you want.**

- STANDARD: displays a standard picture.
- DYNAMIC 1: produces a bold dynamic picture by increasing the picture contrast and the color intensity.
- DYNAMIC 2: produces a more dynamic picture than DYNAMIC 1 by further increasing the picture contrast and the color intensity.
- CINEMA 1: enhances details in dark areas by increasing the black level.
- CINEMA 2: White colors become brighter and black colors become richer, and the color contrast is increased.
- MEMORY: adjusts the picture in greater detail.

When you watch a movie, "CINEMA 1" or "CINEMA 2" is recommended.

You can also select "VIDEO EQUALIZER" from the Control Menu.

Adjusting the picture items in "MEMORY"

You can adjust each element of the picture individually.

- PICTURE: changes the contrast
- BRIGHTNESS: changes the overall brightness
- COLOR: makes the colors deeper or lighter
- HUE: changes the color balance
- GAMMA: adjusts washed out or darkened areas of an image

1 **Press VIDEO EQ repeatedly to select "MEMORY" and press ENTER.**
The "PICTURE" adjustment bar appears.

continued

2 **Press ←/→ to adjust the picture contrast, then press ENTER.**
The adjustment is saved, and "BRIGHTNESS" adjustment bar appears.
Press ↑/↓ to go to another adjustment display.

3 **Repeat Step 2 to adjust "BRIGHTNESS," "COLOR," and "HUE."**
The Video Equalizer display appears. You can check each adjustment. For "GAMMA" adjustment, see "Adjusting the brightness of selected areas (Gamma Correction)" below.

To turn off the Video Equalizer display

Press ↩ RETURN.

To reset the picture items to the default values, press → after Step 3 to select "RESET" and press ENTER.

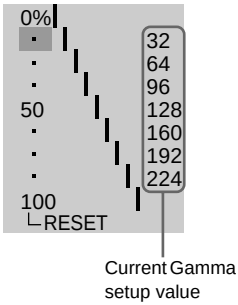
When "PLAYBACK MEMORY" in "CUSTOM SETUP" is set to "ON," the player will save a single setting for up to 200 individual discs. (This does not apply to DVD-RWs in VR mode.)

Adjusting the brightness of selected areas (Gamma Correction)

Depending on your TV or viewing environment, images on the screen may lose definition when a certain area of the image is so light that it appears washed out, or so dark that it blends into the surrounding dark areas. By correcting the Gamma value, you can adjust the brightness of selected areas to get a clearer image. While the "BRIGHTNESS" adjustment controls the brightness of the entire image, the "GAMMA" adjustment is useful when only some portions of the image need adjusting.

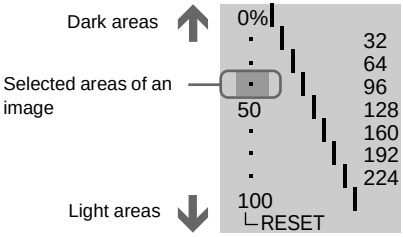
Example: You are watching a movie that is rich in shadows and you want to see the hidden details of the scenery.
If you use "BRIGHTNESS" adjustment, the entire image will become brighter, losing definition of the areas that were initially bright. The "GAMMA" adjustment enables you to gradually increase the brightness of only the darkest areas of the image without sacrificing the definition of the entire image.

1 **After Step 3 of "Adjusting the picture items in MEMORY," press ↑/↓ to select "GAMMA," and press ENTER.**
The "GAMMA" adjustment display appears.



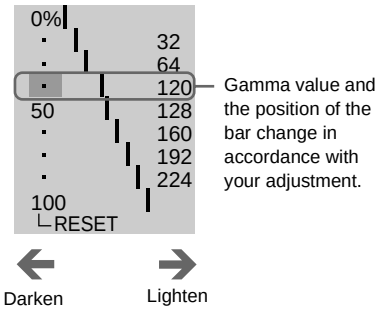
2 Press ↑/↓ to select areas of an image.

The upper region adjusts the dark areas and the lower region adjusts the light areas.



3 Press ←/→ to adjust the brightness level of the area that you selected.

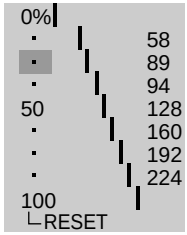
← decreases the level (darkens the area), and → increases the level (lightens the area). The level can be adjusted between 16 and 235. The level for the dark areas can never be greater than the light areas.



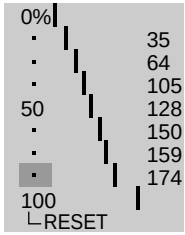
4 Repeat Steps 2 and 3 to adjust the brightness level of other areas that you select.

Try to keep the line that connects the brightness level of each area as smooth and straight as possible, as shown below.

How to lighten the dark areas of an image



How to darken the light areas of an image



To prevent the image from appearing overly altered, do not give the line any sharp changes. Gradually make the adjustments while viewing the image on your TV screen.

Press ↩ RETURN to stop making adjustments to the image.

5 Press ENTER.

The Video Equalizer display appears and the adjusted gamma values are stored in memory.

To reset only the gamma value to the default setting

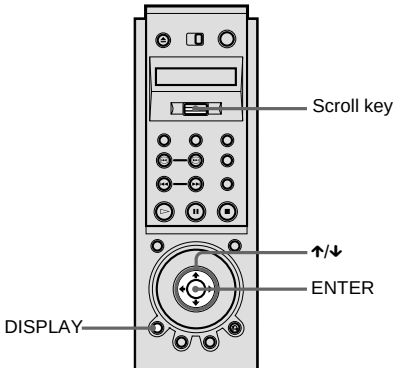
Select “RESET” in the “GAMMA” adjustment display by pressing ↑/↓ and press ENTER.

You can move the gamma adjustment display horizontally by pressing I◄◄ / ►►I.

Enhancing the Playback Picture (DIGITAL VIDEO ENHANCER)

DVD VIDEO DVD-RW VIDEO CD

The Digital Video Enhancer function makes the picture appear clear and crisp by enhancing the outlines of images on your TV screen. Also, this function can soften the images on the screen.

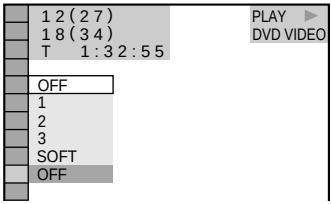


1 Press DISPLAY twice during playback.

The Control Menu appears.

2 Press ↑/↓ to select (DIGITAL VIDEO ENHANCER), then press ENTER.

The options for “DIGITAL VIDEO ENHANCER” appear.



3 Press ↑/↓ to select a level.

As the value increases, the outlines of images on your TV screen will become crisper.

- 1: enhances the outline.
- 2: enhances the outline more than 1.
- 3: enhances the outline more than 2.
- SOFT: softens the image (DVD VIDEO/DVD-RW only).

4 Press ENTER.

The disc plays with the setting you selected.

To cancel the “DIGITAL VIDEO ENHANCER” setting

Select “OFF” in Step 3.

To turn off the Control Menu

Press DISPLAY repeatedly until the Control Menu is turned off.

You can use the LCD and scroll key on the remote to select “DIGITAL VIDEO ENHANCER.” Toggle the scroll key up or down so that “DVE” appears in the LCD screen. Then press down on the scroll key repeatedly to select a level.

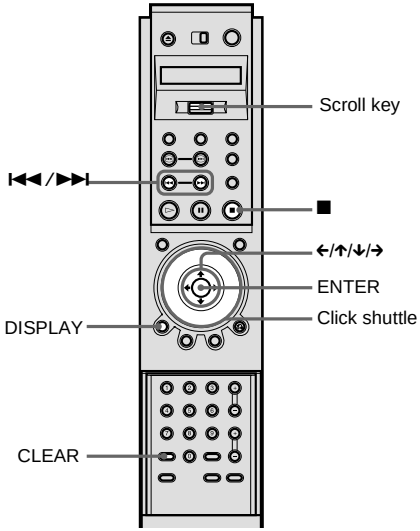
Note

Depending on the DVD/VIDEO CD disc or the scene being played, noise found in the disc may become more apparent. If this happens, it is recommended that you use the BNR function (page 66) with the DVE function. If the condition still does not improve, reduce the Digital Video Enhancer level, or select “SOFT” (DVD VIDEO/DVD-RW only) in Step 3 above.

Labeling the Disc

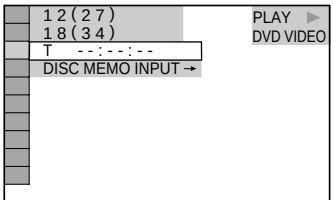
DVD VIDEO VIDEO CD SACD CD

You can label the disc if text is not recorded on the disc (Disc Memo).
You can put a personal title of up to 20 characters on the disc. The Disc Memo can be anything you like, such as a title, musician's name, category, or date of purchase.

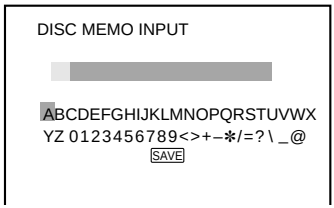


1 **Press DISPLAY during playback.**
The Control Menu appears.

2 **Press ↑/↓ to select (TIME/MEMO) and press ENTER.**
"DISC MEMO INPUT →" appears.

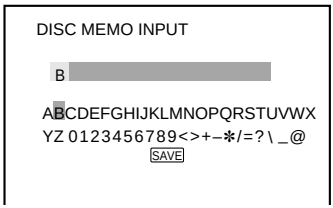


3 **Press ↓ to select "DISC MEMO INPUT →" and press ENTER.**
The "DISC MEMO INPUT" display appears.



4 **Select a character by pressing ←/↑/↓/→ or turning the click shuttle.**
The selected character changes the color.

5 **Press ENTER.**



6 **Repeat Steps 4 and 5 to input other characters.**

7 **When you have entered all the characters for a Disc Memo, select "SAVE" by pressing ←/↑/↓/→ and press ENTER.**
The Disc Memo is stored.

continued

To turn off the Control Menu

Press DISPLAY repeatedly until the Control Menu is turned off.

To erase a character

1. Press ⏮ or ⏭ to move the cursor to the character you want to erase.
2. Press CLEAR.

To insert or overwrite a character

1. Press ⏮ or ⏭ to move the cursor to the character you want to insert or correct.
2. Select a correct character by pressing ←/↑/↓/→ or turning the click shuttle.
3. To insert the character, press ENTER. To overwrite, do not press ENTER but move the cursor by pressing ⏮ or ⏭.

To check the Disc Memo

Toggle the scroll key up or down to display "TIME/TEXT" in the LCD screen on the remote. Then press down on the scroll key repeatedly until the Disc Memo appears at the bottom of the screen.

Notes

- During playback, do not turn off the player by pressing POWER on the player. Doing so may cancel the settings. When you turn off the player, press ■ first to stop playback and then press I/⏻ on the remote. After the power indicator lights up in red and the player enters standby mode, press POWER on the player.
- You can label up to 200 discs. When you have the player store over 200 discs in memory, each new Disc Memo erases the oldest Disc Memo from those first stored.

Locking Discs (CUSTOM PARENTAL CONTROL, PARENTAL CONTROL)

You can set two kinds of playback restrictions for the desired disc.

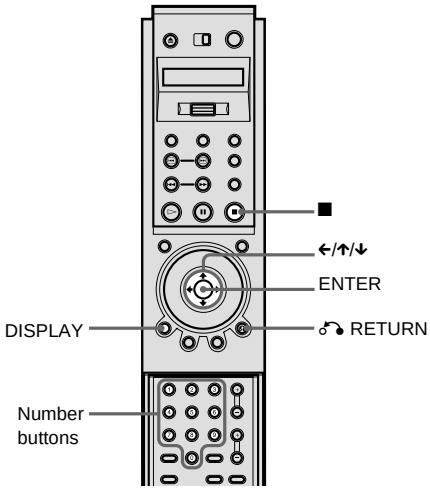
- Custom Parental Control
  You can set the playback restrictions so that the player will not play inappropriate discs.
- Parental Control
  Playback of some DVD VIDEOs can be limited according to a predetermined level such as the age of the users.

The same password is used for both Parental Control and Custom Parental Control.

Custom Parental Control

DVD VIDEO VIDEO CD SACD CD

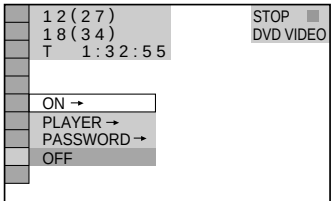
You can set the same Custom Parental Control password for up to 200 discs. When you set the 201st-disc, the first disc is canceled.



1 Insert the disc you want to lock.
If the disc is playing, press ■ to stop playback.

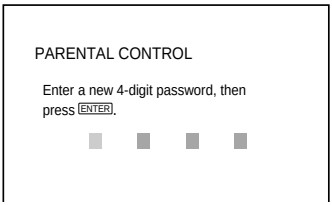
2 Press DISPLAY while the player is in stop mode.
The Control Menu appears.

3 Press ↑/↓ to select (PARENTAL CONTROL), then press ENTER.
The options for "PARENTAL CONTROL" appear.



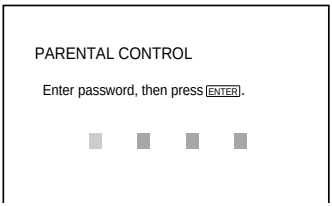
4 Press ↑/↓ to select "ON →," then press ENTER.

■If you have not entered a password
The display for registering a new password appears.



Enter a 4-digit password by using the number buttons, then press ENTER.
The display for confirming the password appears.

■When you have already registered a password
The display for entering the password appears.



5 Enter or re-enter your 4-digit password by using the number buttons, then press ENTER.
"Custom parental control is set." appears and then the screen returns to the Control Menu display.

To turn off the Custom Parental Control function

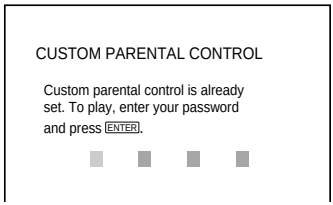
1 Follow Steps 1 through 3 of "Custom Parental Control."

2 Press ↑/↓ to select "OFF →," then press ENTER.

3 Enter your 4-digit password using the number buttons, then press ENTER.

To play a disc for which Custom Parental Control is set

1 Insert the disc for which Custom Parental Control is set.
The "CUSTOM PARENTAL CONTROL" display appears.



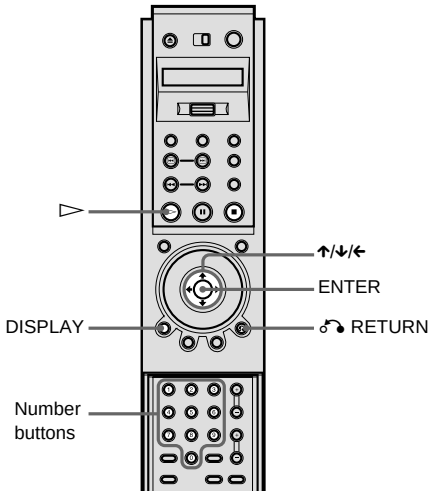
2 Enter your 4-digit password using the number buttons, then press ENTER.
The player is ready for playback.

If you forget your password, enter the 6-digit number "199703" using the number buttons when the "CUSTOM PARENTAL CONTROL" display asks you for your password, then press ENTER. The display will ask you to enter a new 4-digit password.

continued

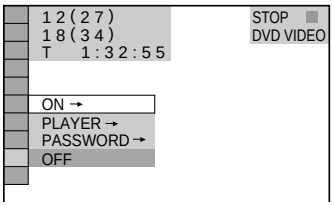
Parental Control (limiting playback by children) DVD VIDEO

Playback of some DVD VIDEOs can be limited according to a predetermined level such as the age of the users. The "PARENTAL CONTROL" function allows you to set a playback limitation level.
A scene that is limited is not played, or it is replaced by a different scene.



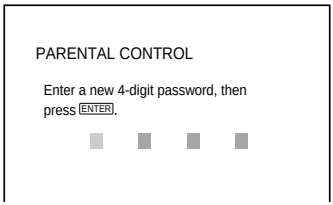
1 **Press DISPLAY while the player is in stop mode.**
The Control Menu appears.

2 **Press ↑/↓ to select (PARENTAL CONTROL), then press ENTER.**
The options for "PARENTAL CONTROL" appear.



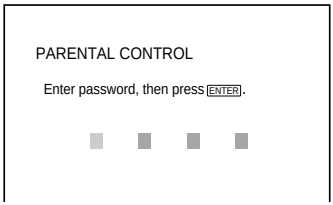
3 **Press ↑/↓ to select "PLAYER →," then press ENTER.**

■If you have not entered a password
The display for registering a new password appears.

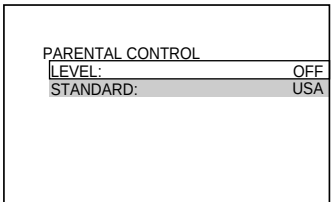


Enter a 4-digit password using the number buttons, then press ENTER.
The display for confirming the password appears.

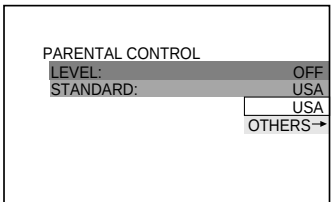
■When you have already registered a password
The display for entering the password appears.



4 **Enter or re-enter your 4-digit password by using the number buttons, then press ENTER.**
The display for setting the playback limitation level appears.

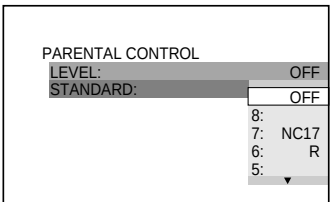


5 **Press ↑/↓ to select "STANDARD," then press ENTER.**
The selection items for "STANDARD" are displayed.

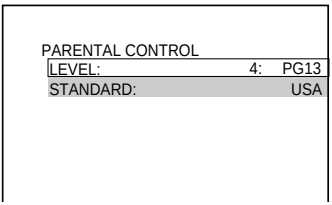


6 **Press ↑/↓ to select a geographic area as the playback limitation level, then press ENTER.**
The area is selected.
When you select "OTHERS →," select and enter a standard code in the table on page 76 using the number buttons.

7 **Press ↑/↓ to select "LEVEL," then press ENTER.**
The selection items for "LEVEL" are displayed.



8 **Select the level you want using ↑/↓, then press ENTER.**
Parental Control setting is complete.



The lower the value, the stricter the limitation.

To turn off the Parental Control function

Set "LEVEL" to "OFF" in Step 8.

To play a disc for which Parental Control is set

1 Insert the disc and press ▷.
The "PARENTAL CONTROL" display appears.

2 Enter your 4-digit password using the number buttons, then press ENTER.
The player starts playback.

If you forget your password, remove the disc and repeat Steps 1 to 3 of "Parental Control (limiting playback by children)." When you are asked to enter your password, enter "199703" using the number buttons, then press ENTER. The display will ask you to enter a new 4-digit password. After you enter a new 4-digit password in Step 4, replace the disc in the player and press ▷. When the "PARENTAL CONTROL" display appears, enter your new password.

Notes

- When you play DVD VIDEOs which do not have the Parental Control function, playback cannot be limited on this player.
- Depending on the DVD VIDEO, you may be asked to change the parental control level while playing the disc. In this case, enter your password, then change the level. If the Resume Play mode is canceled, the level returns to the original level.

continued

Area Code

Standard	Code number	Standard	Code number
Argentina	2044	Korea	2304
Australia	2047	Malaysia	2363
Austria	2046	Mexico	2362
Belgium	2057	Netherlands	2376
Brazil	2070	New Zealand	2390
Canada	2079	Norway	2379
Chile	2090	Pakistan	2427
China	2092	Philippines	2424
Denmark	2115	Portugal	2436
Finland	2165	Russia	2489
France	2174	Singapore	2501
Germany	2109	Spain	2149
Hong Kong	2219	Sweden	2499
India	2248	Switzerland	2086
Indonesia	2238	Taiwan	2543
Italy	2254	Thailand	2528
Japan	2276	United Kingdom	2184

Changing the password

DVD VIDEO VIDEO CD SACD CD

1 Press DISPLAY while the player is in stop mode.
The Control Menu appears.

2 Press ↑/↓ to select (PARENTAL CONTROL), then press ENTER.
The options for "PARENTAL CONTROL" appear.

3 Press ↑/↓ to select "PASSWORD →," then press ENTER.
The display for entering the password appears.

4 Enter your 4-digit password using the number buttons, then press ENTER.

5 Enter a new 4-digit password using the number buttons, then press ENTER.

6 To confirm your password, re-enter it using the number buttons, then press ENTER.

If you make a mistake entering your password

Press ← before you press ENTER in Step 5 and input the correct number.

If you make a mistake

Press ↩ RETURN.

To turn off the Control Menu

Press DISPLAY repeatedly until the Control Menu is turned off.

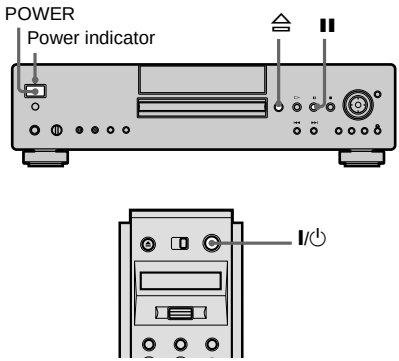
Operation Sound Effects

(Sound Feedback)

The player beeps when the following operations are performed.
The default setting of the Sound Feedback function is set to off.

Operation	Operation sound
Power is turned on	One beep
Power is turned off	Two beeps
▷ is pressed	One beep
❚❚ is pressed	Two beeps
Playback is stopped	One long beep
Operation is not possible	Three beeps

Setting Sound Feedback



1 Press POWER on the player, then press I/⏻ on the remote.

The power indicator lights up in green. When there is a disc in the player, press ⏏ and remove the disc. Then press ⏏ again to close the disc tray.

2 Press and hold ❚❚ on the player for more than two seconds.

You will hear one beep and the Sound Feedback function is turned on.

To turn off the Sound Feedback function

When there is no disc in the player, press and hold ❚❚ on the player for more than two seconds. You will hear two beeps and the Sound Feedback function is turned off.

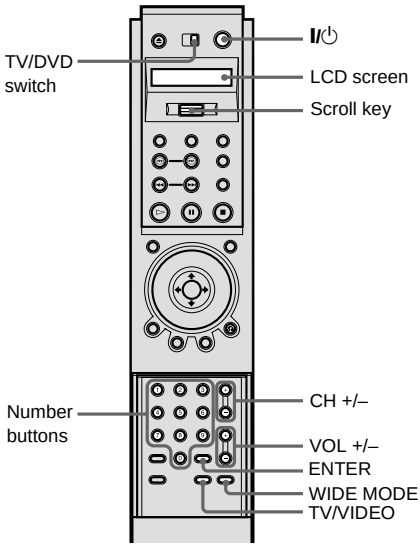
Controlling Your TV or AV Amplifier (Receiver) with the Supplied Remote

By adjusting the remote signal, you can control your TV with the supplied remote. If you connect the player with an AV amplifier (receiver), you can control the volume with the supplied remote.

Notes

- Depending on the units being connected, you may not be able to control your TV or AV amplifier (receiver) using some of the buttons below.
- If you enter a new code number, the code number previously entered will be erased.
- When you replace the batteries of the remote, the code number you have set may be reset to the default setting. Set the appropriate code number again.

Controlling TVs with the remote



1 **Slide the TV/DVD switch to TV.**

2 **While holding down I/⏻, press down on the scroll key.**
"TV P-1" appears in the LCD screen.

3 **Release I/⏻.**

4 **Toggle the scroll key up or down to select your TV's manufacturer's code (see the table below).**

5 **Press down on the scroll key.**
The manufacturer's code flashes and the remote is set.

Code numbers of controllable TVs

If more than one code number is listed, try entering them one at a time until you find the one that works with your TV.

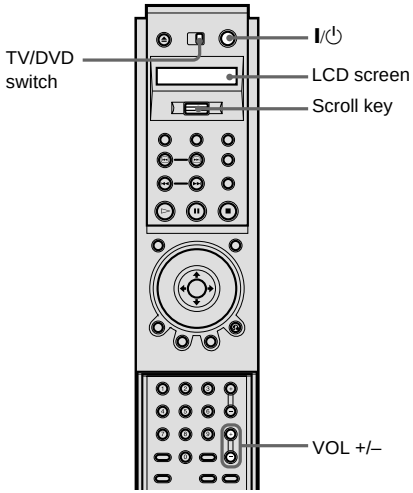
Manufacturer	Code number	Manufacturer	Code number
Sony (default)	1	Panasonic	6,19
Akai	4	Philco	3,4
AOC	4	Philips	8,21
Centurion	12	Pioneer	16
Coronado	3	Portland	3
Curtis-Mathes	12	Quasar	6,18
Daytron	12	Radio Shack	5,14
Emerson	3,4,14	RCA	4,10
Fisher	11	Sampo	12
General Electric	6,10	Samsung	20
Gold Star	3,4,17	Sanyo	11
Hitachi	2,3	Scott	12
J.C.Penney	4,12	Sears	7,10,11
JVC	9	Sharp	3,5,18
KMC	3	Sylvania	8,12
Magnavox	3,8,12	Teknika	3,8,14
Marantz	4,13	Toshiba	7
MGA/ Mitsubishi	4,12,13, 17	Wards	3,4,12
NEC	4,12	Yorx	12
		Zenith	15

Controlling the TV

When you set the TV/DVD switch to TV, you can control the following items with the supplied remote.

By pressing	You can
I/⏻	Turn the TV on or off
VOL +/–	Adjust the volume of the TV
WIDE MODE	Switch to or from the wide mode of a Sony wide TV
TV/VIDEO	Switch the TV's input source between the TV and other input sources
CH +/–, number buttons, and ENTER	Select the channel of the TV

Controlling the volume of your AV amplifier (receiver) with the remote



1 **Slide the TV/DVD switch to DVD.**

2 **While holding down I/⏻, press down on the scroll key.**
"AV P-90" appears in the LCD screen.

3 **Release I/⏻.**

4 **Toggle the scroll key up or down to select your AV amplifier (receiver's) manufacturer's code (see the table below).**

5 **Press down on the scroll key.**
The manufacturer's code flashes and the remote is set.

Code numbers of controllable AV amplifiers (receivers)

If more than one code number is listed, try entering them one at a time until you find the one that works with your AV amplifier (receiver).
If you do not connect an AV amplifier (receiver), you can control your TV's volume by setting the code number to 90 (default). However, you must first set the code number of controllable TVs as explained above.

Manufacturer	Code number
Sony	80, 88, 89, 91
Denon	84, 85, 86
Kenwood	92, 93
Onkyo	81, 82, 83
Pioneer	99
Sansui	87
Technics	97, 98
Yamaha	94, 95, 96

Controlling the AV amplifiers (receivers)

When you set the TV/DVD switch to DVD, you can control the volume of the AV amplifier (receiver) using VOL +/–.

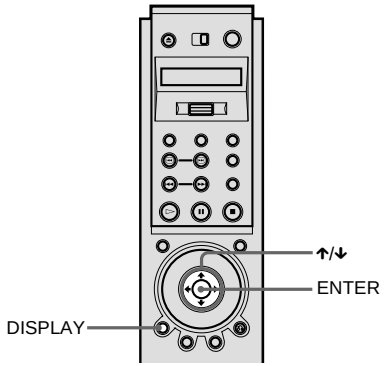
Using the Setup Display

By using the Setup Display, you can make various adjustments to items such as picture and sound. You can also set a language for the subtitles and the Setup Display, among other things. For details on each Setup Display item, see page 81. For an overall list of Setup Display items, see page 103.

Note

Playback settings stored in the disc take priority over the Setup Display settings and not all the functions described may work.

How to use the Setup Display

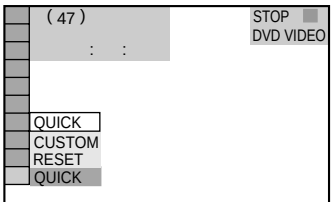


1 **Press DISPLAY when the player is in stop mode.**

The Control Menu appears.

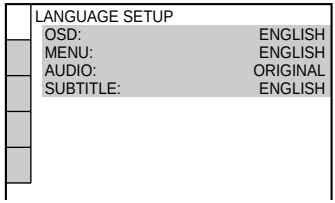
2 **Press ↑/↓ to select (SETUP), then press ENTER.**

The options for “SETUP” appear.



3 **Press ↑/↓ to select “CUSTOM,” then press ENTER.**

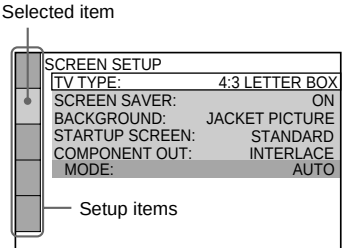
The Setup Display appears.



4 **Press ↑/↓ to select the setup item from the displayed list: “LANGUAGE SETUP,” “SCREEN SETUP,” “CUSTOM SETUP,” “AUDIO SETUP,” or “SPEAKER SETUP.” Then press ENTER.**

The selected Setup item appears.

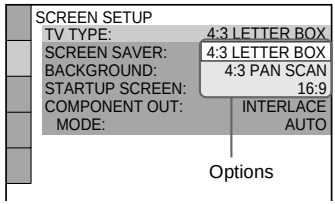
Example: “SCREEN SETUP”



5 **Select an item using ↑/↓, then press ENTER.**

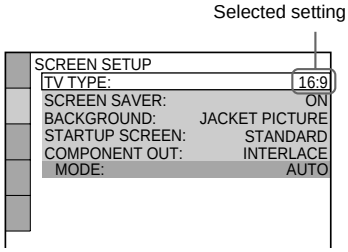
The options for the selected item appear.

Example: “TV TYPE”



6 Select a setting using ↑/↓, then press ENTER.

The setting is selected and setup is complete.
Example: "16:9"



To turn off the Setup Display

Press DISPLAY repeatedly until the Setup Display is turned off.

If you select "QUICK" in Step 3, you will enter the Quick Setup mode (page 31). Follow from Step 5 of the Quick Setup explanation to make basic adjustments.

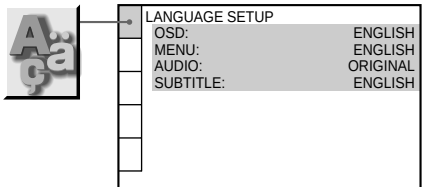
If you select "RESET" in Step 3, you can reset all of the "SETUP" settings on page 103 to 106 to the default settings. After you select "RESET" and press ENTER, select "YES" and press ENTER to reset the settings (it takes a few seconds to complete), or select "NO" and press ENTER to return to the Control Menu. Do not press POWER or I/⏻ when resetting the player.

Setting the Display or Sound Track Language

(LANGUAGE SETUP)

"LANGUAGE SETUP" allows you to set various languages for the on-screen display or sound track.

Select "LANGUAGE SETUP" in the Setup Display. For details on using the display, see "Using the Setup Display" (page 80).



■OSD (On-Screen Display)

Switches the display language on the screen. Select the language from the displayed list.

■MENU (DVD VIDEO only)

You can select the desired language for the disc's menu.

■AUDIO (DVD VIDEO only)

Switches the language of the sound track. Select the language from the displayed list. When you select "ORIGINAL," the language given priority in the disc is selected.

■SUBTITLE (DVD VIDEO only)

Switches the language of the subtitle recorded on the DVD VIDEO.
Select the language from the displayed list. When you select "AUDIO FOLLOW," the language for the subtitles changes according to the language you selected for the sound track.

continued

If you select “OTHERS →” in “MENU,” “SUBTITLE,” and “AUDIO,” select and enter a language code from “Language Code List” (page 102) using the number buttons.

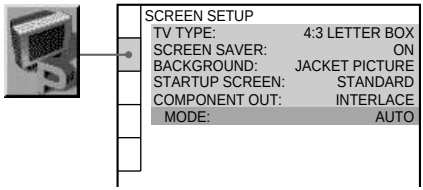
Note

When you select a language that is not recorded on the DVD VIDEO, one of the recorded languages will be automatically selected (except for the “OSD”).

Settings for the Display (SCREEN SETUP)

Choose settings according to the TV to be connected.

Select “SCREEN SETUP” in the Setup Display. For details on using the display, see “Using the Setup Display” (page 80).
The default settings are underlined.



■TV TYPE

Selects the aspect ratio of the connected TV (4:3 standard or wide).

4:3 LETTER BOX	Select this when you connect a 4:3 screen TV. Displays a wide picture with bands on the upper and lower portions of the screen.
4:3 PAN SCAN	Select this when you connect a 4:3 screen TV. Automatically displays the wide picture on the entire screen and cuts off the portions that do not fit.
16:9	Select this when you connect a wide-screen TV or a TV with a wide mode function.

4:3 LETTER BOX

4:3 PAN SCAN

16:9

Note

Depending on the DVD, “4:3 LETTER BOX” may be selected automatically instead of “4:3 PAN SCAN” or vice versa.

■SCREEN SAVER

Turns on and off the screen saver so that the screen saver image appears when you leave the player in pause or stop mode for 15 minutes, or when you play back an SACD/CD for more than 15 minutes. The screen saver will help prevent your display device from becoming damaged (ghosting).
Press ▷ to turn off the screen saver.

ON	Turns on the screen saver.
OFF	Turns off the screen saver.

■BACKGROUND

Selects the background color or picture on the TV screen in stop mode or while playing an SACD/CD.

JACKET PICTURE	The jacket picture (still picture) appears in the background, but only when the jacket picture is already recorded on the disc (CD-EXTRA, etc.). If the disc does not contain a jacket picture, the “GRAPHICS” picture appears.
PICTURE MEMORY	Your favorite picture appears in the background. To store a scene in memory, see “Storing a picture in memory” below.
GRAPHICS	A preset picture stored in the player appears in the background.
BLUE	The background color is blue.
BLACK	The background color is black.

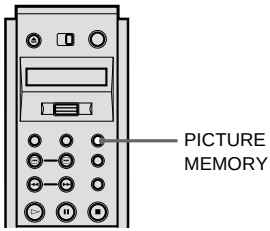
■STARTUP SCREEN

Selects the startup screen. The startup screen image you selected appears on the TV screen when you turn on the player.

STANDARD	The standard startup screen in the player’s memory appears.
PICTURE MEMORY	Your favorite picture appears in the startup screen. To store a scene in memory, see “Storing a picture in memory” below.

Storing a picture in memory

The player can store one scene in memory for both the background and startup screen. During playback, when you find a scene to be stored in memory, press PICTURE MEMORY.
The picture is stored in memory.



Note

If you operate the player while the picture is being stored in memory, the player will fail to store the picture.

■COMPONENT OUT

This will change the type of signal output from the COMPONENT VIDEO OUT jacks on the player. See page 97 for more information about the different types.

continued

INTERLACE	This outputs the signal in interlace format. Select this when you are connected to a standard (interlace format) TV.
PROGRESSIVE	This outputs the signal in progressive (480p) format. Select this when you have a TV that can accept progressive signals.

When the player outputs a Progressive video signal, "PROGRESSIVE" appears in the front panel display.

Note

If you select "PROGRESSIVE" when you connect the player to a TV that cannot accept the signal in progressive format (480p), the image quality will deteriorate. In this case, set the COMPONENT VIDEO OUT/SCAN SELECT switch on the back panel of the player to INTERLACE. Then set "COMPONENT OUT" to "INTERLACE" when you can see the TV screen correctly, and reset COMPONENT VIDEO OUT/SCAN SELECT switch to SELECTABLE.

When "PROGRESSIVE" is selected in "COMPONENT OUT"

You can fine-tune the Progressive (480p) video signal output when you select "PROGRESSIVE" in "COMPONENT OUT" of the "CUSTOM SETUP" display and connect the player to the TV that is able to accept the video signal in progressive format (480p).

■MODE (Conversion Modes)

DVD software can be divided into two types: film based software and video based software. Video based software is derived from TV, such as dramas and sit-coms, and displays images at 30 frames/60 fields per second. Film based software is derived from film and displays images at 24 frames per second. In order for these images to appear natural on your screen when output in PROGRESSIVE mode (60 frames per second), the progressive video signal needs to be converted to match the type of DVD software that you are watching. For more information about conversion modes, see "Progressive Conversion Methods of Film Based and Video Based Software."

AUTO	This will automatically detect if you are playing Film based or Video based software and convert the signal to the appropriate conversion mode. Normally select this position.
VIDEO	This will set the conversion mode for Video based software, regardless of the type of software that you are playing.

Notes

- Some DVD software contains both Video and Film. For instance, DVDs of movies may contain the movie taken on film, and a "Making of" sequence taken on video.
- When you play video based software with progressive signals, sections of some types of images may appear unnatural due to the conversion process when output through the COMPONENT VIDEO OUT jacks. Images from the S VIDEO OUT 1/2 and VIDEO OUT 1/2 jacks are unaffected as they are output in the interlace format.

Progressive conversion methods of Film based and Video based software

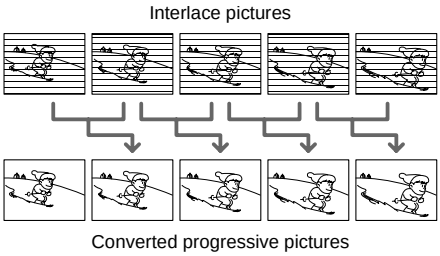
This player converts video based software and film based software in the following manner.

Video based software conversion

Video shows an image by alternately displaying every other line of an image (field) at 30 frames (60 fields) per second (Interlace format).

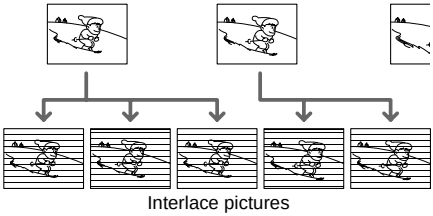
The Interlace format displays 30 frames (60 fields) per second by displaying every other line of the image, causing scanning lines to appear across the image. Furthermore, since only half of the image is shown at once, the amount of information contained in an image is limited.

The Progressive format displays 60 entire frames per seconds. The player accomplishes this by converting each field into a frame by using either a field-based conversion method or a frame-based conversion method. The appropriate method is automatically selected by the player according to the movement of the images on the screen. If the movement on the screen is slow, the frame-based conversion method borrows adjacent field information to fill in the missing information. If the movement on the screen is rapid, the field-based conversion method creates the missing information by predicting the movement of the images on the screen from field to field. The end result is an image that is higher in quality when compared to the Interlace format.

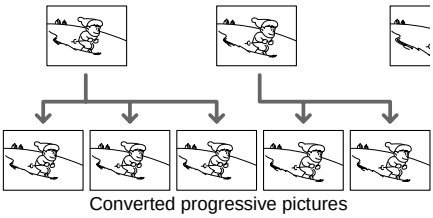


Film based software conversion

Film shows an image by displaying an entire image at 24 frames per second. When you watch a film on television, the television displays every other line of the frame as a field, thus reducing information level and the clarity of the film image.



This player solves this problem by increasing the speed at which the frames are displayed, consecutively showing 3 identical frames followed by 2 identical frames in the time that it normally takes to show 2 consecutive frames. The end result is that the 24 frames per second are increased to 60 frames per second, which is the speed at which Progressive video signals are shown.

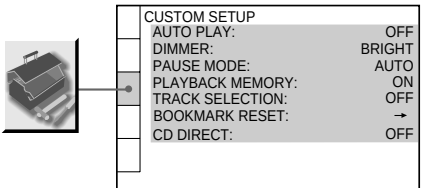


This not only allows film to be shown in a frame based format, it also increases the clarity and sharpness which is unique to Progressive format images.

Custom Settings (CUSTOM SETUP)

Use this to set up playback related and other settings.

Select “CUSTOM SETUP” in the Setup Display. For details on using the display, see “Using the Setup Display” (page 80).
The default settings are underlined.



■AUTO PLAY

Selects the Auto Play setting when you turn on the player.

OFF	Does not use “TIMER,” “DEMO1,” or “DEMO2” to start playback.
TIMER	Starts playing when the player is turned on. The player can start playback at any time when connected to a timer (not supplied). Set the timer when the player is in standby mode (the power indicator lights up in red).
DEMO1	Starts playing the first demonstration automatically.
DEMO2	Starts playing the second demonstration automatically.

■DIMMER

Adjusts the lighting of the front panel display.

BRIGHT	Makes the front panel display bright.
DARK	Makes the front panel display dark.
AUTO DARK	Makes the front panel display dark if you do not operate the player or remote for a short while.
AUTO OFF	Turns off the lightning of the front panel display if you do not operate the player or remote for a short while.
OFF	Turns off the lighting of the front panel display.

By using the FL OFF button on the player or scroll key on the remote, you can turn on/off the front panel display regardless the “DIMMER” setting (except when it is set to “OFF.”)

■PAUSE MODE (DVD VIDEO/DVD-RW only)

Selects the picture in pause mode.

AUTO	The picture, including subjects that move dynamically, is output with no jitter. Normally select this position.
FRAME	The picture, including subjects that do not move dynamically, is output in high resolution.

■PLAYBACK MEMORY (DVD VIDEO/VIDEO CD only)

The player can store the “SUBTITLE” and other settings of each disc for up to 200 discs (Playback Memory).
Set the Playback Memory function “ON” or “OFF.”

ON	Stores the settings in memory when you eject the disc.
OFF	Does not store the settings in memory.

The following settings are stored in memory by the Playback Memory function.
— ANGLE (page 64)*
— AUDIO (page 58)*
— BNR (page 66)
— BOOKMARK (page 53)
— DIGITAL VIDEO ENHANCER (page 70)
— SUBTITLE (page 65)*
— VIDEO EQUALIZER (page 67)
* DVD VIDEO only

Notes

- The player can store the settings of up to 200 discs. When you store the setting of disc number 201, the first disc setting is canceled.
- The Playback Memory function cannot be used for DVD-RWs in VR mode.
- During playback, do not turn off the player by pressing POWER on the player. Doing so may cancel the settings. When you turn off the player, press ■ first to stop playback and then press I/⏻ on the remote. After the power indicator lights up in red and the player enters standby mode, press POWER on the player.

■TRACK SELECTION (DVD VIDEO only)

Gives the sound track which contains the highest number of channels priority when you play a DVD VIDEO on which multiple audio formats (PCM, DTS, or Dolby Digital format) are recorded.

OFF	No priority given.
AUTO	Priority given.

Notes

- When you set the item to “AUTO,” the language may change. The “TRACK SELECTION” setting has higher priority than the “AUDIO” settings in “LANGUAGE SETUP” (page 81).
- If PCM, DTS, and Dolby Digital sound tracks have the same number of channels, the player selects PCM, DTS, and Dolby Digital sound tracks in this order.

■BOOKMARK RESET→

Resets the bookmarks. Select this and press ENTER. The “BOOKMARK RESET” display appears. Press ENTER again to erase all of the bookmarks in all of the discs.

■CD DIRECT

Eliminates the use of unnecessary circuits when playing CDs. This setting will be activated when you open or close the disc tray.
This function affects the output of the following jacks:
— AUDIO OUT L/R 1/2 jacks
— 5.1CH OUTPUT jacks
— PHONES jack

OFF	Select this when playing CD discs, including CD type DTS discs.
ON	Eliminates the use of unnecessary circuits needed to play CDs.

Note

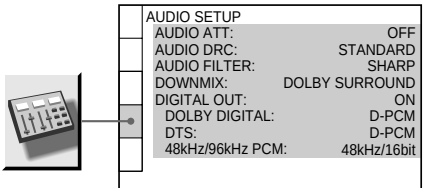
If you select “ON” when playing CD type DTS discs, the sound will become noisy.

Settings for the Sound

(AUDIO SETUP)

"AUDIO SETUP" allows you to set the sound according to the playback and connection conditions.

Select "AUDIO SETUP" in the Setup Display. For details on using the display, see "Using the Setup Display" (page 80).
The default settings are underlined.



■AUDIO ATT (attenuation)

If the playback sound is distorted, set this item to "ON." The player reduces the audio output level.
This function affects the output of the following jacks:
— AUDIO OUT L/R 1/2 jacks
— 5.1CH OUTPUT jacks
— PHONES jack

OFF	Turns off the audio attenuation. Normally, select this position.
ON	Reduces the audio output level so that no sound distortion occurs. Select this when the playback sound from the speakers is distorted.

■AUDIO DRC (Dynamic Range Control) (DVD VIDEO/DVD-RW only)

Makes the sound clear when the volume is turned down when playing a DVD that has the "AUDIO DRC" function. This affects the output from the following jacks:
— AUDIO OUT L/R 1/2 jacks
— 5.1CH OUTPUT jacks
— PHONES jack
— DIGITAL OUT (OPTICAL or COAXIAL) jack only when "DOLBY DIGITAL" is set to "D-PCM" (page 89).

STANDARD	Normally select this position.
TV MODE	Makes the low sounds clear even if you turn the volume down. It is especially recommended when you listen to the sound using the speakers of the TV.
WIDE RANGE	Gives you the feeling of being at a live performance. When you use high quality speakers, it is even more effective.

■AUDIO FILTER (except SACD)

Selects the digital filter to reduce noises above the 22.05 kHz (Sampling frequency (Fs) of the audio sources is 44.1 kHz), 24 kHz (Fs is 48 kHz), or 48 kHz (Fs is above 96 kHz).

SHARP	Provides a wide frequency range and spatial feeling.
SLOW	Provides smooth and warm sound.

Notes

- There may be little effect by changing the digital filter depending on discs or playback environment.
- There is no effect on SACDs.

■DOWNMIX (DVD VIDEO/DVD-RW only)

Switches the mixing down methods when you play a DVD on which rear signal components such as "LS", "RS," or "S" are recorded in Dolby Digital or DTS format. For details on the rear signal components, see "Changing the Sound" (page 58). This function affects the output of the following jacks:
— AUDIO OUT L/R 1/2 jacks
— DIGITAL OUT (OPTICAL or COAXICAL) jack when "DOLBY DIGITAL" and "DTS" are set to "D-PCM" (page 89).
— PHONES jack

DOLBY SUR-ROUND	Select this when the player is connected to an audio component that conforms to Dolby Surround (Pro Logic). The output signals which reproduce the Dolby Surround effect are downmixed to 2 channels.
NORMAL	Select this when the player is connected to an audio component that does not conform to Dolby Surround (Pro Logic). All of the output signals are downmixed to 2 channels without the Dolby Surround (Pro Logic) effect.

■DIGITAL OUT

Selects if audio signals are output via the DIGITAL OUT (OPTICAL or COAXIAL) jack.

ON	Normally select this position. When you select "ON," set "DOLBY DIGITAL," "DTS," and "48kHz/96kHz PCM." For details on setting these items, see "Setting the digital output signal."
OFF	The player does not output the audio signals via the DIGITAL OUT (OPTICAL or COAXIAL) jack. The influence of the digital circuit upon the analog circuit is minimal.

Note

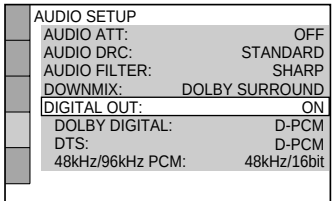
SACD audio signals are not output from the digital jack.

Setting the digital output signal

Switches the method of outputting audio signals when you connect the following component using an optical or a coaxial digital cord via the DIGITAL OUT (OPTICAL or COAXIAL) jack.

— Amplifier (receiver) with digital input jack
— Amplifier (receiver) with a built-in DTS or DOLBY DIGITAL decoder
— MD or DAT deck

For connection details, see page 23.
Select "DOLBY DIGITAL," "DTS," and "48kHz/96kHz PCM" after setting "DIGITAL OUT" to "ON."



■DOLBY DIGITAL (DVD VIDEO/DVD-RW only)

Selects the Dolby Digital signals to be output via the DIGITAL OUT (OPTICAL or COAXIAL) jack.

D-PCM	Select this when the player is connected to an audio component lacking a built-in Dolby Digital decoder. You can select whether the signals conform to Dolby Surround (Pro Logic) or not by making adjustments to the "DOWNMIX" item in "AUDIO SETUP" (page 88).
DOLBY DIGITAL	Select this when the player is connected to an audio component with a built-in Dolby Digital decoder. If the player is connected to an audio component lacking a built-in Dolby Digital decoder, do not set this. Otherwise, when you play the Dolby Digital sound track, a loud noise (or no sound) will come out from the speakers, affecting your ears or causing the speakers to be damaged.

continued

■DTS (DVD VIDEO only)

Selects the DTS signals to be output via the DIGITAL OUT (OPTICAL or COAXIAL) jack.

D-PCM	Select this when the player is connected to an audio component lacking a built-in DTS decoder. If you play DTS audio sound tracks, the player outputs stereo signals via the DIGITAL OUT (OPTICAL or COAXIAL) jacks.
DTS	Select this when the player is connected to an audio component having a built-in DTS decoder. If the player is connected to an audio component lacking a built-in DTS decoder, do not set this. Otherwise, when you play the DTS sound track, a loud noise (or no sound) will come out from the speakers, affecting your ears or causing the speakers to be damaged.

■48kHz/96kHz PCM (DVD VIDEO only)

Selects the sampling frequency of the audio signal to be output via the DIGITAL OUT (OPTICAL or COAXIAL) jack.

48kHz/16bit	The audio signals of DVD VIDEOs are always converted to 48kHz/16bit.
96kHz/24bit	All types of signals including 96kHz/24bit are output in their original format. However, if the signal is encrypted for copyright protection purposes, the signal is only output as 48kHz/16bit. If a receiver (amplifier) which cannot accept 96kHz is connected to the player, do not set this. Otherwise, a loud noise may come out from the speakers.

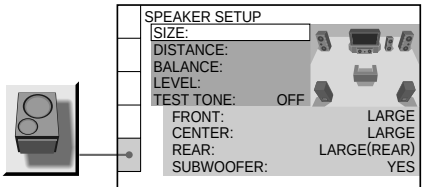
Notes

- Even if you set “48kHz/96kHz PCM” in “AUDIO SETUP” to “96kHz/24bit,” the sampling frequency is converted to 48kHz/16bit when a “SURROUND” mode (page 60) is selected.
- The analog audio signals from the AUDIO OUT L/R 1/2 jacks and 5.1 CH OUTPUT jacks are not affected by this setting and keep their original sampling frequency level.

Settings for the Speakers
(SPEAKER SETUP)

To obtain the best possible surround sound, set the size of the speakers you have connected and their distance from your listening position. Then use the test tone to adjust the volume and the balance of the speakers to the same level.
This setting is effective when connecting the speaker with 5.1 CH OUTPUT jacks (page 25).

Select "SPEAKER SETUP" in the Setup Display. For details on using the display, see "Using the Setup Display" (page 80).
The default settings are underlined.



To return to the default setting

Select the item, then press CLEAR. Note that only the "SIZE" setting does not return to the default setting.

■SIZE

Selects the size of the speakers to be connected.
• FRONT

LARGE	Normally select this position.
SMALL	When the sound cracks or the surround sound effects are difficult to hear, select this. This activates the bass redirection circuitry and outputs the bass frequencies of the front speaker from the subwoofer.

• CENTER

NONE	If you do not connect a center speaker, select this.
LARGE	Normally select this position.
SMALL	When the sound cracks or the surround sound effects are difficult to hear, select this. This activates the bass redirection circuitry and outputs the bass frequencies of the center speaker from other speakers.

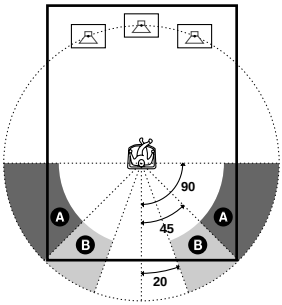
• REAR

NONE	If you do not connect rear speakers, select this.
LARGE	(REAR/SIDE): Normally select this position. Select either of these according to the rear speaker's position*.
SMALL	(REAR/SIDE): When the sound cracks or the surround sound effects are difficult to hear, select this. Select either of these according to the rear speaker's position*. This activates the bass redirection circuitry and outputs the bass frequencies of the rear speaker from other speakers.

* Rear speaker position
Correctly specify the location of the rear speakers to enjoy the surround effect.
- Set to the "SIDE," if the location of the rear speakers corresponds to section Ⓐ below.
- Set to the "REAR," if the location of the rear speakers corresponds to section Ⓑ below.

continued

This setting affects only “VIRTUAL REAR SHIFT,” “VIRTUAL MULTI REAR,” and “VIRTUAL MULTI DIMENSION” mode (page 60).
These settings do not affect the SACD Multi audio signals.



• SUBWOOFER

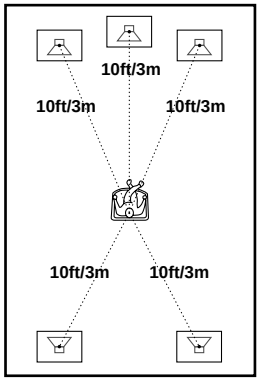
NONE	If you do not connect a subwoofer, select this. This activates the bass redirection circuitry and outputs the LFE signals from the front speakers as long as the front speaker size is set to “LARGE.”
YES	If you connect a subwoofer, select this to output the LFE (low frequency effect) channel from the subwoofer. When you set the other speakers settings to “SMALL,” the subwoofer makes up for the missing bass frequencies of the speakers.

Notes

- The cut off frequency for the subwoofer is fixed at 120 Hz.
- If your speakers are too small to reproduce low bass frequencies, please set all speaker settings to “SMALL” and utilize a subwoofer for low frequency sound.
- Even if there are fewer than 6 speakers connected, the player distributes the audio signal components to the front speakers.

■DISTANCE

You can set distance from the listening position to your speakers. Set the distance to your front speakers in “FRONT” first. Values in “CENTER” (center speaker) and “REAR” (rear speaker) will automatically change to the same value. Adjust these values to reflect the actual distance to your center and rear speakers within the area described in the following table.
The default distance setting for the speakers in relation to the listening position is shown below.



Be sure to change the value in the Setup Display when you move the speakers. The default adjustments are in parentheses.

FRONT (10ft/3m)	Front speaker distance from the listening position can be set in 1 foot (0.3meter) increments from 4 to 50 feet (1.2 to 15.2 meters)
CENTER (10ft/3m)	Center speaker distance can be moved up to 2 feet (0.6 meter) backward from the front speakers or 5 feet (1.5 meters) forward closer to the listening position, in 1 foot (0.3 meter) increments.
REAR (10ft/3m)	Rear speaker distance can be moved up to 16 feet (4.8 meters) closer to your listening position from the front speaker position, in 1 foot (0.3 meter) increments.

Notes

- If each of the front or rear speakers are not placed at an equal distance from your listening position, set the distance according to the closest speaker.
- Do not place the rear speakers farther away from your listening position than the front speakers.
- These settings do not affect the SACD Multi audio signals.

■BALANCE

You can vary the balance of the left and right speakers as follows. Be sure to set "TEST TONE" to "ON" for easy adjustment.
The default adjustments are in parentheses.

FRONT (0dB)	Adjust the balance between the front left and right speakers (–6dB [L] to +6dB [R], 0.5dB increments).
REAR (0dB)	Adjust the balance between the rear left and right speakers (–6dB [L] to +6dB [R], 0.5dB increments).

■LEVEL

You can vary the level of each speaker as follows. Be sure to set "TEST TONE" to "ON" for easy adjustment.
The default adjustments are in parentheses.

FRONT (0dB)	Adjust the level of the front speakers (–6dB to 0dB, 0.5 dB increments).
CENTER (0dB)	Adjust the level of the center speaker (–12dB to 0dB, 0.5dB increments).
REAR (0dB)	Adjust the level of the rear speakers (–12dB to 0dB, 0.5dB increments).
SUBWOOFER (0dB)	Adjust the level of the subwoofer (–10dB to +10dB, 0.5dB increments).

To adjust the volume of all the speakers at one time

Use the amplifier's (receiver's) volume control.

■TEST TONE

The speakers will emit a test tone. Use this when you use the 5.1CH OUTPUT jacks and adjust the "BALANCE" and "LEVEL."

OFF	The test tone is not emitted from the speakers.
ON	The test tone is emitted from each speaker in sequence while adjusting balance or level. When you select one of the "SPEAKER SETUP" items, the test tone is emitted from both left and right speakers simultaneously.

Adjusting the speaker volume and level

1 Select "SPEAKER SETUP" in the Setup Display.

2 Select "TEST TONE" and set to "ON."
You will hear the test tone from each speaker in sequence.

3 From your listening position, select "BALANCE" or "LEVEL" and adjust the value of "BALANCE" using ←/→ and "LEVEL" using ↑/↓.
The test tone is emitted from both left and right speakers simultaneously.

4 Select "TEST TONE" and set to "OFF" to turn off the test tone.

Notes

- When you adjust the speaker settings, the sound cuts off for a moment.
- The test tone signals are not output from the digital jack.

Troubleshooting

If you experience any of the following difficulties while using the player, use this troubleshooting guide to help remedy the problem before requesting repairs. Should any problem persist, consult your nearest Sony dealer.

Power

The power is not turned on.

➡ Check that the power cord is connected securely.

Picture

There is no picture.

➡ The connecting cords are not connected securely.
➡ The connecting cords are damaged.
➡ The player is not connected to the correct TV input jack (page 20).
➡ The video input on the TV is not correctly set.
➡ You have pressed VIDEO ON/OFF (or VIDEO OFF) (page 37).
➡ You have selected "PROGRESSIVE" in "COMPONENT OUT" even though your TV cannot accept the signal in progressive format. In this case, set the COMPONENT VIDEO OUT/SCAN SELECT switch on the back panel of the player to INTERLACE. Then set "COMPONENT OUT" to "INTERLACE" after you can see the TV screen correctly, and reset COMPONENT VIDEO OUT/SCAN SELECT switch to SELECTABLE.

Picture noise appears.

➡ The disc is dirty or flawed.
➡ If the picture output from your player goes through your VCR to get to your TV, the copy-protection signal applied to some DVD programs could affect picture quality. If you still experience problems even when you connect your player directly to your TV, please try connecting your player to your TV's S video input (page 20).
➡ You have selected "PROGRESSIVE" in "COMPONENT OUT" even though your TV cannot accept the signal in progressive format. In this case, set the COMPONENT VIDEO OUT/SCAN SELECT switch on the back panel of the player to INTERLACE. Then set "COMPONENT OUT" to "INTERLACE" after you can see the TV screen correctly, and reset COMPONENT VIDEO OUT/SCAN SELECT switch to SELECTABLE.
➡ Even if your TV is compatible with progressive format (480p) signals, the image may be affected when you set "COMPONENT OUT" to "PROGRESSIVE." In this case, set "COMPONENT OUT" to "INTERLACE."

Even though you set the aspect ratio in "TV TYPE" of "SCREEN SETUP," the picture does not fill the screen.

➡ The aspect ratio of the disc is fixed on your DVD.

Sound

There is no sound.

➡ The connecting cord is not connected securely.
➡ The connecting cord is damaged.
➡ The player is connected to the wrong input jack on the amplifier (receiver) (page 25, 27, 29).
➡ The amplifier (receiver) input is not correctly set.
➡ The player is in pause mode or in Slow-motion Play mode.
➡ The player is in fast forward or fast reverse mode.
➡ If the audio signal does not come through the DIGITAL OUT (OPTICAL or COAXIAL) jack, check the audio settings (page 89).
➡ SACD audio signals are not output from the digital jack.

Sound is noisy.

➡ The disc is dirty or flawed.

Sound distortion occurs.

➡ Set “AUDIO ATT” in “AUDIO SETUP” to “ON” (page 88).

The surround effect is difficult to hear when you are playing a Dolby Digital, or DTS sound track.

➡ Check the speaker connections and setting (page 25, 31, 89)

➡ Depending on the DVD, the output signal may not be the entire 5.1 channels. It may be monaural or stereo even if the sound track is recorded in Dolby Digital or DTS format.

The sound comes from the center speaker only.

➡ Depending on the disc, the sound may come from the center speaker only.

➡ Set “SURROUND” to “OFF” in the Control Menu display (page 60).

Operation

The remote does not function.

➡ There are obstacles between the remote and the player.

➡ The distance between the remote and the player is too far.

➡ The remote is not pointed at the remote sensor on the player.

➡ The batteries in the remote are weak.

The disc does not play.

➡ There is no disc inside.

➡ The disc is turned over.
Insert the disc with the playback side facing down on the disc tray.

➡ The disc is skewed.

➡ The player cannot play CD-ROMs, etc. (page 6).

➡ The region code on the DVD does not match the player.

➡ Moisture has condensed inside the player. Remove the disc and leave the player turned on for about half an hour. Turn on the power again before playing the disc (page 3).

➡ The player cannot play DVD-Rs, DVD-RWs, CD-Rs, or CD-RWs that are not finalized.

The disc does not start playing from the beginning.

➡ Program Play, Shuffle Play, Repeat Play, or A-B Repeat Play has been selected (page 43). Press CLEAR to cancel these functions before playing a disc.

➡ Resume Play has been selected.
During stop, press ■ on the player or the remote and then start playback (page 39).

➡ Depending upon the disc, the menu may automatically appear on the TV screen.

The player starts playing the disc automatically.

➡ The disc features an auto playback function.

➡ “AUTO PLAY” in “CUSTOM SETUP” is set to “TIMER” (page 86).

Playback stops automatically.

➡ Some discs may contain an auto pause signal. While playing such a disc, the player stops playback at the auto pause signal.

You cannot perform some functions such as Stop, Search, Slow-motion Play, Repeat Play, Shuffle Play, or Program Play.

➡ Depending on the disc, you may not be able to do some of the operations above. See the operating manual that comes with the disc.

continued

The language for the sound track cannot be changed.

➡ Try using the DVD's menu instead of the scroll key on the remote (page 40).
➡ Multilingual tracks are not recorded on the DVD being played.
➡ The DVD prohibits the changing of the language for the sound track.

The subtitle language cannot be changed.

➡ Try using the DVD's menu instead of the scroll key on the remote (page 40).
➡ Multilingual subtitles are not recorded on the DVD being played.
➡ The DVD prohibits the changing of the subtitles.

The subtitle cannot be turned off.

➡ Try using the DVD's menu instead of the scroll key on the remote (page 40).
➡ The DVD prohibits the subtitles being turned off.

The angles cannot be changed.

➡ Try using the DVD's menu instead of the scroll key on the remote (page 40).
➡ Multi-angles are not recorded on the DVD being played. The angle can only be changed when the "ANGLE" indicator lights up on the front panel display (page 9).
➡ The DVD prohibits changing of the angles.

The player does not operate properly.

➡ When static electricity, etc., causes the player to operate abnormally, press POWER on the player to turn the player off and then on again.

Nothing is displayed on the front panel display.

➡ Turn on the front panel display using the FL OFF button or scroll key, or set "DIMMER" to any setting other than "OFF."

5 numbers or letters are displayed on the screen and on the front panel display.

➡ The self-diagnosis function was activated. (See the table on page 97.)

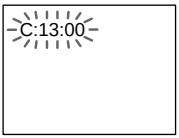
The disc tray does not open and "LOCKED" appears on the front panel display.

➡ Contact your Sony dealer or local authorized Sony service facility.

Self-diagnosis Function

(When letters/numbers appear in the display)

When the self-diagnosis function is activated to prevent the player from malfunctioning, a five-character service number (e.g., C 13 00) with a combination of a letter and four digits appears on the screen and the front panel display. In this case, check the following table.



First three characters of the service number	Cause and/or corrective action
C 13	The disc is dirty. ➡ Clean the disc with a soft cloth (page 7).
C 31	The disc is not inserted correctly. ➡ Re-insert the disc correctly.
E XX (xx is a number)	To prevent a malfunction, the player has performed the self-diagnosis function. ➡ Contact your nearest Sony dealer or local authorized Sony service facility and give the 5-character service number. Example: E 61 10

Glossary

Chapter (page 9)

Sections of a picture or a music feature that are smaller than titles. A title is composed of several chapters. Depending on the disc, no chapters may be recorded.

Digital Cinema Sound (DCS) (page 62)

Technology that Sony developed to enjoy surround in a home using 4 or more speakers. It simulates the sound of a movie editing studio instead of the usual concert hall so that you can enjoy the surround sound of a movie theater in the comfort of your own home.

Dolby Digital (page 25, 89)

Digital audio compression technology developed by Dolby Laboratories. This technology conforms to 5.1-channel surround sound. The rear channel is stereo and there is a discrete subwoofer channel in this format. Dolby Digital provides the same 5.1 discrete channels of high quality digital audio found in Dolby Digital cinema audio systems. Good channel separation is realized because all of the channel data are recorded discretely and little deterioration is realized because all channel data processing is digital.

Dolby Surround (Pro Logic) (page 29)

Audio signal processing technology that Dolby Laboratories developed for surround sound. When the input signal contains a surround component, the Pro Logic process outputs the front, center and rear signals. The rear channel is monaural.

continued

DTS (page 25, 89)

Digital audio compression technology that Digital Theater Systems, Inc. developed. This technology conforms to 5.1-channel surround sound. The rear channel is stereo and there is a discrete subwoofer channel in this format. DTS provides the same 5.1 discrete channels of high quality digital audio.

Good channel separation is realized because all of the channel data is recorded discretely and little deterioration is realized because all channel data processing is digital.

DVD VIDEO (page 6)

A disc that contains up to 8 hours of moving pictures even though its diameter is the same as a CD.

The data capacity of a single-layer and single-sided DVD is 4.7 GB (Giga Byte), which is 7 times that of a CD. The data capacity of a double-layer and single-sided DVD is 8.5 GB, a single-layer and double-sided DVD is 9.4 GB, and double-layer and double-sided DVD is 17GB.

The picture data uses the MPEG 2 format, one of the worldwide standards of digital compression technology. The picture data is compressed to about 1/40 (average) of its original size. The DVD also uses a variable rate coding technology that changes the data to be allocated according to the status of the picture. Audio information is recorded in a multi-channel format, such as Dolby Digital, allowing you to enjoy a more real audio presence.

Furthermore, various advanced functions such as the multi-angle, multilingual, and Parental Control functions are provided with the DVD.

DVD-RW (page 6)

A DVD-RW is a recordable and rewritable disc with the same size as the DVD VIDEO. The DVD-RW can be recorded in two different modes: VR mode and Video mode. VR (Video Recording) mode enables various programming and editing functions, some of which are limited in the case of Video mode. Video mode complies with DVD VIDEO format and is compatible with DVD players while a DVD-RW recorded in VR mode can only be played on DVD-RW compliant players. The “DVD-RW” appears in this manual, or the on-screen display refers to DVD-RWs in VR mode.

Film based software (page 85)

DVDs can be classified as Film based or Video based software. Film based DVDs contain the same images (24 frames per second) that are shown at movie theaters.

Interlace format (page 84)

Interlace format shows every other line of an image as a single “field” and is the standard method for displaying images on television. The even number field shows the even numbered lines of an image, and the odd numbered field shows the odd numbered lines of an image.

Index (SACD/CD)/Video Index (VIDEO CD) (page 9)

A number that divides a track into sections to easily locate the point you want on an SACD/CD or VIDEO CD. Depending on the disc, no index may be recorded.

Parental Control (page 72)

A function of the DVD used to limit playback of the disc according to the age of the user and the limitation level in each country. The limitation varies from disc to disc; when it is activated, or playback is completely prohibited, violent scenes are skipped or replaced with other scenes, etc.

Progressive format (page 84)

Compared to the Interlace format that alternately shows every other line of an image (field) to create one frame, the Progressive format shows the entire image at once as a single frame. This means that while the Interlace format can show 30 frames (60 fields) in one second, the Progressive format can show 60 frames in one second. The overall picture quality increases and still images, text, and horizontal lines appear sharper. This player is compatible with the 480 progressive format.

Region Code (page 6)

This system is used to protect the copyrights. A region number is allocated on each DVD player or DVD disc according to the sales region. Each region code is shown on the player as well as on the disc packaging. The player can play the discs that match its region code. The player can also play discs with the mark. Even when the region code is not shown on the DVD, the region limit may still be activated.

Scene (page 9)

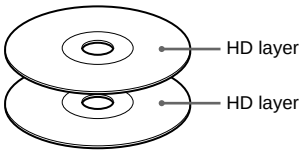
On a VIDEO CD with PBC (playback control) functions, the menu screens, moving pictures and still pictures are divided into sections called “scenes.”

Super Audio CD (SACD) (page 6)

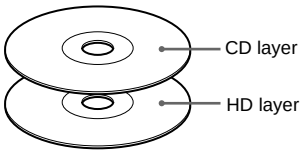
An SACD disc can reproduce sounds that are extremely faithful to the original sound by use of DSD (Direct Stream Digital) technology. This technology utilizes a sampling frequency of 2.8224 MHz, which is 64 times that of a conventional CD, and 1-bit quantization that enables the disc to hold 4 times the amount of information that a standard PCM format CD can hold. SACDs are divided into the following types.

- Super Audio CD (single layer disc)
  This disc consists of a single HD layer*.
  * High density signal layer for the Super Audio CD

- Super Audio CD (dual layer disc)
  This disc consists of dual HD layers and is capable of extended play over long periods. Also, as the dual layer disc consists of dual HD layers on one side only, you do not have to turn the disc over during playback.

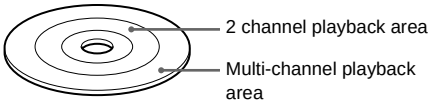


- Super Audio CD + CD (Hybrid disc)
  This disc consists of an HD layer and a CD layer. Also, as the dual layers are on one side only, you do not have to turn the disc over during playback. You can play the CD layer using a conventional CD player.



continued

- 2 channel + Multi-channel Super Audio CD
  This disc consists of the 2 channel playback area and the multi-channel playback area.



Title (page 9)

The longest section of a picture or music feature on a DVD, movie, etc., in video software, or the entire album in audio software.

Track (page 9)

Sections of a picture or a music feature on an SACD/CD or VIDEO CD (the length of a song).

TV Virtual Surround (TVS) (page 60)

Technology from Sony developed to produce surround sound for home use using just a stereo TV. Designed to work with the sound characteristics of your TV, this technology brings the excitement of surround sound to your home using nothing more than your stereo TV's internal speakers. Furthermore, various TVS modes are available. For example, "TVS WIDE" uses just two speakers to create a virtual sound environment that makes you feel like you are surrounded by multiple speakers.

Video based software (page 84)

DVDs can be classified as Film based or Video based software. Television dramas or sit-coms are examples of Video based software and display images at 30 frames (or 60 fields) per second.

Specifications

System

Laser	Semiconductor laser
Signal format system	NTSC

Audio characteristics

Frequency response	DVD (PCM 96 kHz): 2 Hz to 44 kHz (–2 dB ± 1 dB at 44 kHz) SACD: 2 Hz to 100 kHz (–3 dB ± 1 dB at 50 kHz) CD: 2 Hz to 20 kHz (±0.5 dB)
Signal-to-noise ratio (S/N ratio)	115 dB (DVD VIDEO) (AUDIO OUT L/R 1/2 jacks only)
Harmonic distortion	0.002 %
Dynamic range	DVD VIDEO/SACD: 103 dB CD: 99 dB
Wow and flutter	Less than detected value (±0.001% W PEAK)

Outputs

Jack name	Jack type	Output level	Load impedance
AUDIO OUT L/R (1/2)	Phono jack	2 Vrms (at 50 kilohms)	Over 10 kilohms
DIGITAL OUT (OPTICAL)	Optical output jack	–18 dBm	Wave length: 660 nm
DIGITAL OUT (COAXIAL)	Phono jack	0.5 Vp-p	75 ohms terminated
5.1CH OUTPUT	Phono jack	2 Vrms (50 kilohms)	Over 10 kilohms
COMPONENT VIDEO OUT(Y, P_B, P_R)	Phono jack	Y: 1.0 Vp-p P_B, P_R: 0.7 Vp-p	75 ohms, sync negative 75 ohms
VIDEO OUT (1/2)	Phono jack	1.0 Vp-p	75 ohms, sync negative
S VIDEO OUT (1/2)	4-pin mini DIN	Y: 1.0 Vp-p C: 0.286 Vp-p	75 ohms, sync negative 75 ohms terminated
PHONES	Phone jack	12mW	32 ohms

General

Power requirements	120 V AC, 60 Hz
Power consumption	26 W
Dimensions (approx.)	430 × 113 × 343 mm (17 × $4^1/_2$ × $13^5/_8$ in.) (w/h/d) incl. projecting parts
Mass (approx.)	5.3 kg ($11^{11}/_{16}$ lb)
Operating temperature	5 °C to 35 °C (41 °F to 95 °F)
Operating humidity	25 % to 80 %

Supplied accessories

See page 16.

Specifications and design are subject to change without notice.

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Language Code List

For details, see pages 58, 65, 81.
The language spellings conform to the ISO 639: 1988 (E/F) standard.

Code	Language	Code	Language	Code	Language	Code	Language
1027	Afar	1183	Irish	1347	Maori	1507	Samoan
1028	Abkhazian	1186	Scots Gaelic	1349	Macedonian	1508	Shona
1032	Afrikaans	1194	Galician	1350	Malayalam	1509	Somali
1039	Amharic	1196	Guarani	1352	Mongolian	1511	Albanian
1044	Arabic	1203	Gujarati	1353	Moldavian	1512	Serbian
1045	Assamese	1209	Hausa	1356	Marathi	1513	Siswati
1051	Aymara	1217	Hindi	1357	Malay	1514	Sesotho
1052	Azerbaijani	1226	Croatian	1358	Maltese	1515	Sundanese
1053	Bashkir	1229	Hungarian	1363	Burmese	1516	Swedish
1057	Byelorussian	1233	Armenian	1365	Nauru	1517	Swahili
1059	Bulgarian	1235	Interlingua	1369	Nepali	1521	Tamil
1060	Bihari	1239	Interlingue	1376	Dutch	1525	Telugu
1061	Bislama	1245	Inupiak	1379	Norwegian	1527	Tajik
1066	Bengali; Bangla	1248	Indonesian	1393	Occitan	1528	Thai
		1253	Icelandic	1403	(Afan)Oromo	1529	Tigrinya
1067	Tibetan	1254	Italian	1408	Oriya	1531	Turkmen
1070	Breton	1257	Hebrew	1417	Punjabi	1532	Tagalog
1079	Catalan	1261	Japanese	1428	Polish	1534	Setswana
1093	Corsican	1269	Yiddish	1435	Pashto; Pushto	1535	Tonga
1097	Czech	1283	Javanese	1436	Portuguese	1538	Turkish
1103	Welsh	1287	Georgian	1463	Quechua	1539	Tsonga
1105	Danish	1297	Kazakh	1481	Rhaeto-Romance	1540	Tatar
1109	German	1298	Greenlandic			1543	Twi
1130	Bhutani	1299	Cambodian	1482	Kirundi	1557	Ukrainian
1142	Greek	1300	Kannada	1483	Romanian	1564	Urdu
1144	English	1301	Korean	1489	Russian	1572	Uzbek
1145	Esperanto	1305	Kashmiri	1491	Kinyarwanda	1581	Vietnamese
1149	Spanish	1307	Kurdish	1495	Sanskrit	1587	Volapük
1150	Estonian	1311	Kirghiz	1498	Sindhi	1613	Wolof
1151	Basque	1313	Latin	1501	Sangho	1632	Xhosa
1157	Persian	1326	Lingala	1502	Serbo-Croatian	1665	Yoruba
1165	Finnish	1327	Laothian	1503	Singhalese	1684	Chinese
1166	Fiji	1332	Lithuanian	1505	Slovak	1697	Zulu
1171	Faroese	1334	Latvian; Lettish	1506	Slovenian		
1174	French	1345	Malagasy				
1181	Frisian					1703	Not specified

List of Setup Display Items

The default settings are underlined.

LANGUAGE SETUP (page 81)

OSD	ENGLISH FRENCH SPANISH PORTUGUESE
MENU	ENGLISH FRENCH SPANISH PORTUGUESE GERMAN ITALIAN DUTCH CHINESE JAPANESE DANISH SWEDISH FINNISH NORWEGIAN RUSSIAN OTHERS →
AUDIO	ORIGINAL (All other selections are the same as the “MENU” language.)
SUBTITLE	AUDIO FOLLOW (All other selections are the same as the “MENU” language.)

continued

SCREEN SETUP (page 82)

TV TYPE	4:3 LETTER BOX 4:3 PAN SCAN 16:9		
SCREEN SAVER	ON OFF		
BACKGROUND	JACKET PICTURE PICTURE MEMORY GRAPHICS BLUE BLACK		
STARTUP SCREEN	STANDARD PICTURE MEMORY		
COMPONENT OUT	INTERLACE		
	PROGRESSIVE	MODE	AUTO VIDEO

CUSTOM SETUP (page 86)

AUTO PLAY	OFF TIMER DEMO1 DEMO2
DIMMER	BRIGHT DARK AUTO DARK AUTO OFF OFF
PAUSE MODE	AUTO FRAME
PLAYBACK MEMORY	ON OFF
TRACK SELECTION	OFF AUTO
BOOKMARK RESET	→
CD DIRECT	OFF ON

AUDIO SETUP (page 88)

AUDIO ATT	OFF ON		
AUDIO DRC	STANDARD TV MODE WIDE RANGE		
AUDIO FILTER	SHARP SLOW		
DOWNMIX	DOLBY SURROUND NORMAL		
DIGITAL OUT	ON	DOLBY DIGITAL	D-PCM DOLBY DIGITAL
		DTS	D-PCM DTS
		48 kHz/96 kHz PCM	48 kHz/16 bit 96 kHz/24 bit
	OFF		

continued

SPEAKER SETUP (page 91)

SIZE	FRONT	LARGE SMALL
	CENTER	NONE LARGE SMALL
	REAR	NONE LARGE (REAR) LARGE (SIDE) SMALL (REAR) SMALL (SIDE)
	SUBWOOFER	NONE YES
DISTANCE (The distance from the listening position.)	FRONT	4ft ~ 50ft (1.2m ~ 15.2m)
	CENTER	0ft ~ 52ft (0m ~ 15.8m) (It changes to match the front speaker setting.)
	REAR	0ft ~ 50ft (0m ~ 15.2m) (It changes to match the front speaker setting.)
BALANCE	FRONT	– 6dB ~ + 6dB
	REAR	– 6dB ~ + 6dB
LEVEL	FRONT	– 6dB ~ 0dB
	CENTER	– 12dB ~ 0dB
	REAR	– 12dB ~ 0dB
	SUBWOOFER	– 10dB ~ + 10dB
TEST TONE	OFF ON	

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